

The National

Future Farmer

Owned and Published by NFFA



April - May, 1964



"We got the first D-21 in the county."

Some things a boy just *has* to brag about. How far he can throw a baseball. What a fighter his dog is. The size of the fish he almost caught. Time enough when he grows up for the deeper, quieter pride a man feels in accomplishment. His fields . . . home . . . family. And maybe even a little extra for his own growing, energetic, boastful son. Hoping that his boy will want to stay with the land.

Well, even if a man's not one for boasting, he wouldn't be human if he didn't get a charge out of commanding a D-21. Eight tons of solid muscle without an ounce of fat. A big, massive, masculine, acre-hungry brute—but beautiful. All Allis-Chalmers tractor people—engineers, craftsmen, dealers, service people—*all* have a special feeling for the Big Orange D-21. Not *bragging*, understand . . .

9 out of 10 drivers can't answer all these questions. Can you?

A good driver is one who never gets himself into an emergency situation yet who knows how to handle one just the same. Firestone, a pioneer in highway safety, poses some tricky questions that can help you tell whether you know the finer points of car handling.

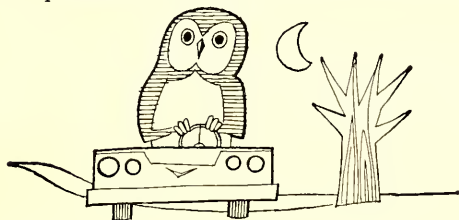
Q Good drivers try to anticipate the action of the car ahead. When you see lazy puffs of smoke coming from the exhaust, what's he going to do?

A The driver has taken his foot off the accelerator. He may be getting ready to turn or stop. Stay behind until his intentions are clear.



Q Is it more dangerous to drive with tires that are under-inflated or over-inflated? Can you justify your answer?

A Under-inflated tires will result in a blowout more often than over-inflated ones. The reason is that the added flexing of the tire causes more heat build up. Your Firestone man can answer your tire questions. Follow his recommendations for tire pressure.



Q You probably had been driving a few months before your parents let you drive at night. Do you know how much greater the chances are that an accident after dark will result in a fatality?

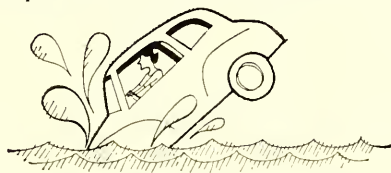
A Night accidents result in fatalities twice as often as daytime accidents. Make doubly sure that you, your car and your mental state are in driving condition.

Q The skill of the driver and the condition of his equipment are two important considerations in making a safe driver. What's a third, and (to many authorities), the most important factor?

A Your mental state is probably the most important factor in driving safely. The smart thing to do is let somebody else drive when you're angry or worried.

Q This is a rare one, but it happens. You're driving along a slippery road when you skid into the lake. What now?

A Don't panic! You won't sink immediately. Wait until the car rights itself — it will. Then open a window and crawl out. Water pressure won't let you open the door until the car has filled.



Q How much faster do you wear out tires at 70 mph than at 35? Why?

A About 65% faster. For maximum tire mileage, stay between 40 and 55. The faster you go, the more you distort your tires and set up irregular heat patterns. Firestone makes different tires to meet different driving needs.

Q You're doing 65 on the turnpike and you want to pass a car going 60. How much road do you need to pass safely?

A You'll need 4,000 feet of clear road. At 70, you ought to be 140 feet behind when you start to pass and you shouldn't pull in until you're 140 feet ahead. That will take 40 seconds. Figure it out.

Q What tire is first choice for original equipment on new cars?

A Firestone — with good reason.

YOUR SYMBOL OF QUALITY AND SERVICE

Firestone

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Our Cover

A crown, an FFA chapter sweetheart, and a proud Future Farmer bring spring a bit closer to all.

For members of the Burlington, Washington, Chapter, a smiling president and chapter sweetheart framed against the Cascade Mountains are a sight to behold.

PHOTO BY WILFORD D. WILLS

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FOR TALL THINKERS

Thinking "tall"—which means stretching your thinking above the kind you do when you just want to get by—brings you several rewards. Tall thinking spurs you on to do a bigger job. And when the job is done, you have the reward of satisfaction within yourself for having done it.

At Purina, we'd like to reward your tall thinking in another way. We've started a whole new

program of Youth Awards for both boys and girls. They're the two handsome trophies pictured above—modeled after the famous Danforth Youth Statues at Gray Summit, Mo., and Washington, D. C.

If you're a tall thinker—and if you'd like to win one of these Ralston Purina Youth Awards, ask your Purina Dealer or Purina Salesman for details. Or, write us at . . .

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Your Editors Say...



ONE characteristic most Future Farmers seem to possess is their ability to profit from their failures. Read about the record of any of the leaders in your organization today, and you usually find they have met with their share of setbacks. Oftentimes this difference between success and failure hangs on their ability to try again and profit from their mistakes. It shows up frequently in articles about Future Farmers in this magazine.

History is filled with great men who knew the bitter taste of defeat. George Washington lost more battles than he won, but he is best known for his victories. Thomas Edison tried many materials unsuccessfully before he found a filament for the modern electric light. At one time, Daniel Webster could not make a speech, but through continued effort he became one of America's greatest orators. And a baseball player who struck out 1,330 times—more than any other player—is not remembered for his failures. Today we remember Babe Ruth for the times he stepped to the plate and met with success by hitting a home run.

No doubt you too have had failure come your way. Maybe it was in sports, your school work, or an enterprise on your farm. Did it cause you to become discouraged, or did it fire you with determination to succeed? Think about it the next time something doesn't turn out right. You will do much better the next time you try if you will cash in on this experience.

Speaking of failures, one of the best examples in the country today is the school dropout. It is a matter of concern to the whole nation because of the unemployment and poverty caused by the unschooled and unskilled.

You have much to gain when you continue your education as far as money, ability, and interest will let you go. In addition to increasing your future earnings, you will enjoy many things in life that the less educated will miss. The satisfaction of being responsible citizens, parents, and community leaders will be quite meaningful to you in the years ahead. And your education is one of the best investments you can make. It has been estimated by Arthur Mauch, professor of agricultural economics at Michigan State University, that you'll get a 17-cent return on every dollar invested in an education. This is far greater than that on most capital investments.

One point often overlooked by critics of the farm program is that many of the services of USDA benefit the consumer as well as the producer. Almost every day, the Department serves consumers in more than 50 areas. Research in nutrition, clothing, and the school lunch program are examples. More important, research on more efficient production and marketing, and better ways to control insects and disease have helped keep food costs down. Americans spend only 19 percent of their take-home pay on food. Compare this to 30 percent by the British, 50 percent by the Russians, and up to 90 percent in some of the underdeveloped countries.

Wilson Carnes,
Editor

The National FUTURE FARMER



Is your farm machinery making you see red?

A broken part stops a crew in the field. A tractor engine devours fuel like a hog and works far below its power limit. A bearing won't hold grease. A piston needs replacement immediately.

Trouble. It shows up big as life on the minus side of your ledger. Or at end of season as a crop-quality loss or a profit loss.

Chances are it never had to happen. Call your Texaco Farm Service Distributor and let him tell you about Texaco preventive maintenance. He has the answers to practically every service and

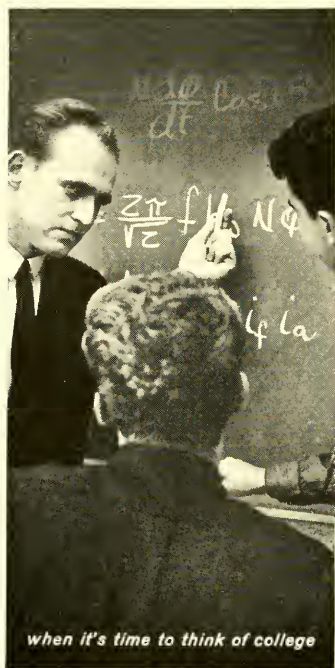
lubricating problem for every piece of equipment on your farm. He can suggest how you can cut maintenance costs and increase the life of your equipment . . . how to decrease fuel consumption and maintain usable power. And he can advise you on the petroleum products you need to keep your machinery producing, to help you farm more efficiently and economically.

Get in touch with your Texaco Farm Service Distributor. He can help keep your farm machinery from putting you in the red.

Here are a few of the top-quality petroleum products for the farm from Texaco:

1. Marfak, the superior lubricant that stays on the job.
2. Havoline Motor Oil stops waste because it stops deposits best.
3. Texaco Multigear Lubricant EP.
4. Regal Oils for hydraulics.
5. Famous Fire Chief gasoline. And many other Texaco oils and lubricants for successful farm operation.





find out about engineering at MSOE

Planning your education correctly now will enhance your career later! That's why you should obtain all the facts about MSOE programs in Electrical and Mechanical Engineering and Technology.

Learn about courses leading to 4-year Bachelor of Science and 2-year Associate in Applied Science degrees. Find out about MSOE scholarships, financial aids, job placement opportunities, and other services.

Assure yourself of a bright future in the exciting field of space age engineering and technology. Write for your free "Career" booklet which will tell you about educational advantages at MSOE.



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☐ Electrical fields ☐ Mechanical fields

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Looking Ahead

SYNTHETIC MEAT

Food technologists have extracted the protein from soybeans, spun it into fibers, and are actually weaving it into food substances resembling sliced ham, chipped beef, chicken, and roast beef! The synthetic food has the chewiness, taste, and appearance of the agricultural product it copies, and can be made with a fat content of less than 1 percent. Consumers already can buy the products in the Columbus, Ohio, area.

MULCH FROM A BUCKET

There's a new agricultural mulch available that is made from petroleum and sprayed on the soil like water! Named "ENCAP," the water emulsion mulch is sprayed on croplands at normal planting temperatures, forming a continuous film over the seedbed. The new mulch absorbs sunlight to increase soil temperatures from 10 to 20 degrees and at the same time, retards evaporation from the seed zone. Developed and sold by Humble and Armour, ENCAP can be applied by any sprayer at the rate of 40 to 150 gallons per acre.

POWERFUL FLY STERILANT

Scientists within the USDA are working with a compound so powerful that one pound of it will completely sterilize 500 million houseflies. Their goal has been to develop a safe chemosterilant that will prevent the pesky housefly from reproducing yet have little effect on its normal behavior. The new sterilant, more powerful than any insecticide now available, is slated for more testing before release.

INSECTS TO CONTROL WEEDS

Canadian and U. S. officials are turning loose tiny insects that are helping control certain weeds. In Canada, flea beetles help control Canadian thistle after tests showed they would rather starve than eat any other plant. In Oregon, the sage defoliating moth is helping to kill seven million acres of sagebrush, while in Nebraska, a natural insect enemy of puncture vine has begun to kill that plant pest. Extensive tests show no harm to crops or other plants.

BRANDING DAIRY CATTLE

Branding is coming back as the cheapest and most practical way to identify cattle. Dairy cattle on North Carolina Performance Tests were branded with numbers six inches in diameter so they could be easily identified and recorded. The brands were then registered with the State Department of Agriculture as security against cattle rustling. The branding resulted when specialists found their biggest problem in Performance Testing was identification.

CAMERA LOCATES ANIMAL ILLS

Through the use of thermography, scientists are photographing animals to find where they have injuries. Injured areas give off increased heat, so researchers developed a camera that records body temperatures on film. Scanning the animal's body, the temperature variations are recorded on film as white for hot areas and black for cool areas. A bruised hock indicates a temperature rise of 8 degrees, calcium deposits on a hoof record 5 degrees, and a splint shows a 3-degree rise.

FEEDING AFFECTS MILK CONTENT

The fat and protein content of milk has been varied considerably by changing rations and roughage, dairy scientists at Virginia Polytechnic Institute report. The fat content of milk dropped from 3.4 to 2.3 percent in six weeks when cows were fed high levels of grain and no forage. At the same time, cows fed the same grain (26 pounds daily) plus 24 pounds of corn silage had a higher protein content in their milk. Tests showed as fat content dropped, the protein content increased.



Lee's Master Tailor keeps the student body fit (His tapered "White" Lee Leens put pep in every step)

"White" Lee Leen slacks are currently setting the pace for young men with an eye for smart styling. Lee's Master Tailor takes pride in creating the right tapered fit from 100% Sanforized, Mercerized rugged Leatherneck Twill, and with ample freedom-of-stride built in. You'll like Lee Leens for their lean, hip-hugging

line and that long-legged look. Choose Lee Leens in Sand Beige, Loden or Black. Other master-tailored Leesure slacks are available in twills, polished cottons, fine textured weaves. Classic and continental styling. Lee's swinging colors: Sand Beige, Bone "White", Sea Foam, Loden and Black. Leesures from \$4.95 to \$7.95.

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Custer, Michigan

I would like to thank you for sending me the December-January issue of *The National FUTURE FARMER*, which covered the 1963 National Convention. Besides being at the Convention this year to receive my American Farmer Degree, I was also lucky to attend the 1962 Convention as a state officer of the Michigan Association, where my brother and I sang for the Tuesday evening Vespers program.

While on the way to the 1962 Convention, I received word that my wife, Donna, had our own little Future Farmer. She wanted me to continue to the Convention but stated, "The next time we'll all go." And this we did! My mother, wife, our boy Jimmy, and I all went to Kansas City this past fall.

Your Magazine is tops in our home, and we greatly enjoy the articles on all the young farmers.

James M. Shoup

Ruthton, Minnesota

I am a 16-year-old sophomore in high school and have been a member of FFA for nearly two years. I live with my parents, one brother, and two sisters. We farm a half section of land, raise about 500 hogs, and feed out about 100 head of beef cattle a year.

This past year, for my FFA super-

vised farming program, I rented 17 acres of good land. I decided flax would be best to start with, since I rented the land for $\frac{2}{3}$, $\frac{1}{3}$ share. We had an average growing season, and when harvest time came, I received a yield of eight bushels per acre. When I hauled the flax to the local elevator, it was worth only about \$2.80 a bushel. This was discouraging, but it didn't bother me too much because everybody else got the same price. The real "jolt" came when I completed my FFA record book. After paying all expenses, but not figuring anything for labor, I had a grand total of minus \$56.00. I had done all that work for nothing. If I had received a fair price for that flax (let's say \$5.00), I could have paid all my bills and still had more than \$3.25 for my labor.

What we as Future Farmers need to

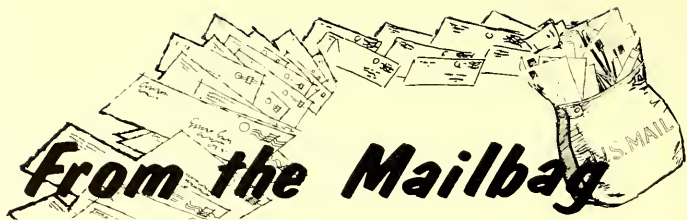
know is not how to produce but how to sell. When I receive my copy of the FFA Magazine, I look for an article on how to sell, but to my knowledge, none has ever appeared.

From reading this, you have probably realized that I strongly believe in and support the National Farmers Organization. The FFA magazine has never mentioned this organization. I believe that you owe it to the members of the FFA to openly support the NFO.

As the Creed says, "I believe in the future of farming," but without a price, based on the cost of production plus a reasonable profit, there will be no future in farming.

Earl De Wilde

We have never had an article on marketing flax, Earl, but we agree that selling is as important as producing. A



*Take a tip from
top raisers...*

FEED THE



**Holstein breeder N. Newcomb,
Cods Point Farm, Trappe, Md.**

"Our calves and heifers both benefit from the Milk-Bank Boost. Kaff-A Milk Replacer gives us healthier, heavier calves, cuts scouring. Kaff-A Booster Pellets help heifers grow faster, breed sooner."



**Manford Stewart, Frankfort, Ind.,
leading Hampshire breeder**

"We produced 4,000 certified pigs last year, and Kraylets is a key part of all our feeding programs. The Milk-Bank Booster gives us bigger, healthier litters, better feed efficiency, less backfat. Keeps sows in good condition."



**Henry Kruger, owner of
Kruger's Poultry Farm, Dinuba, Calif.**

"During a recent cold snap, some of my neighbors had 50% drops in production. My flock held its 76% average, thanks to the Milk-Bank Boost of Pex Pellets. I get 80% large eggs and less culls, using Pex the year around."



farmer should carefully consider his market when he plans to produce a particular farm product. As a matter of policy, the FFA cannot single out one farm organization and support it but does recommend that Future Farmers join an organization of their choice as they grow into farming.—Ed.

Stuart, Iowa

This morning while looking at the Foundation award application blanks, I noticed that there is a dairy award but no sheep or swine award. Because hog farming has increased these last few years, I think there should be a swine award. There should be both hog and sheep awards to give the boys that raise these animals a chance to win an award.

I don't know whether you can do anything about this, but I think it would be a good idea.

Kenneth Eddy

There is an FFA Foundation award for livestock farming, which a sheep or hog producer could receive. Your chapter advisor will have this information.—Ed.

Springfield, Illinois

I am writing about the article entitled "Rifles, Rights, and Responsibility." I am greatly interested in this type of

article and would like to see more articles like it in your Magazine as well as in other magazines.

Tom Schmidt

East Thetford, Vermont

Just a short note to show my appreciation for such a nice Magazine. I enjoy it very much, especially the articles about other FFA members and what they have done.

I am a Green Hand in the Thetford Chapter of the FFA. It has helped me gain confidence to speak in front of large groups of people.

Our vo-ag teacher has shown several FFA films in class. The one I really enjoyed was the "Star Farmers of America."

Michael E. Anderson

Tampa, Florida

In the February-March, 1964, issue was an article by Ralph Hinds, as told to James Grundman, entitled "Let's Change Junior Auctions," which I would like permission to reprint.

This is something that follows my own beliefs, and while it probably will start a fuss if I mention it, figure it'll be worth any battle.

Lyle G. Van Bussum
Tampa Tribune

St. Louis, Missouri

May I compliment you on the very

excellent article on page 56 of your February-March issue. As you can imagine, Purina is often drawn into the bidding for animals which were fed our products. The principle and ramifications of this type of auction leave a great deal to be desired.

Possibly the greatest fallacy lies in the false economic picture which the youngster receives. Mr. Hinds has done a fine job in pointing this out, and we believe that youth projects should be pointed toward practical commercial enterprises. The step toward evaluating the animals on efficiency, cost, and carcass value is a very logical approach.

I feel certain that many organizations would join our endorsement of this excellent article.

R. C. Morton, Manager
Educational Department

The following young people from foreign countries would like to have FFA members for penpals. You can write to them at the following addresses:

Michael David, 89 Brickfield Road, Ebute Metta, Lagos, Nigeria.

Kehirde Habeeb, 91 Olushi Street, Lagos, Nigeria.

M. A. Salu, 25 Evans Street, Lagos, Nigeria.

Kunle Olubobokun, 89 Brickfield Road, Ebute Metta, Lagos, Nigeria.

C. Abdul Ala. S., Dil Bandung 1/42, Malang 32, Indonesia.

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F. Miller, Mgr., Santa Rosa Stables, Texas, Waggoner Quarter Horse breeders

"Pace Pellets give our colts what they need—a fast, healthy start. The Milk-Bank Boost of Pace is part of our program for mares, studs and show horses, and we think it has a lot to do with keeping them in top condition."



Minnesota Dairyman Archie Zarling raises own Holstein herd replacements

"Kaff-A Milk Replacer gives me big, thrifty, healthy calves. And the Milk-Bank Boost of Kaff-A Booster Pellets produces heifers that can be bred at 12 to 13 months. It keeps my cows' milk production high."



W.W. Callan, owner of Callan Ranch, Waco, Tex., Santa Gertrudis breeder

"We give our showcase herd the Milk-Bank Boost, Kaff-A Booster Pellets. It brings out the best qualities of our stock, helps them gain faster, stay in top health and condition, and gives them extra bloom and gloss."



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Here by the Owl

Mr. Advisor:

How Can I Be A Better Public Speaker?

PUBLIC speaking events are important to Future Farmers because they help develop effective oral communications, which are helpful in any career. Here are some ideas that we use in the Rockmart Chapter.

Motivation is important when you first develop a public speaking program. You may be able to get support from civic clubs and farm organizations on sponsoring awards for chapter and district winners.

To win you'll need to practice a great deal. Practice helps insure an effective delivery that is both enthusiastic and animated. You should be confident as well as modest and unassuming. Your delivery should not attract attention to itself but should allow the audience to concentrate on your speech.

Body movements are very important to good delivery, as they help get and maintain interest and attention. Keep in mind your facial expression, posture, movement, and gestures. Your facial expression should be governed by the meaning in your words. Look at your audience and act natural.

Your posture should be good—erect

Marcus Daws
FFA Advisor
Rockmart, Georgia



yet relaxed so as to be comfortable. Keep your feet six to 12 inches apart. Your hands can be at your side on the lectern beside you. Gestures with your hands should be used to convey meaning. Pointed fingers, clenched fists, and an open hand are types that help to convey meaning to your audience.

Movement is important in your delivery to attract attention. Changing position on the platform, moving from behind the lectern to the right or left, or walking forward a few steps toward your audience helps.

You can find many interested people in your community who will help you if you only show a desire to do well in public speaking.



John Mowrer
FFA Advisor
Unionville, Missouri

MEMBERS of the FFA at Unionville are encouraged to avail themselves of every opportunity to speak. During the time they are enrolled in vo-ag, they give frequent talks in front of the class, at FFA meetings, and before civic clubs. Each student is graded on content, delivery, and effectiveness. Members are encouraged to enroll in speech class in high school to get more valuable training.

You as a Future Farmer can be a better public speaker! Become an active member and officer in your class and club at school and read books and magazines, particularly agricultural and political news. To be an effective speaker, you must be well informed.

Don't forget the FFA public speaking contest with its awards and honors. Have your advisor go over the rules with you; then choose your own topic

and write a rough draft of your speech. It is probably best to stay away from controversial, political, and local-interest-only topics at first. Sit down with your advisor and go over this rough draft with him to decide on changes in wording or additional references. You might have to rewrite it several times before the real practice begins.

Practice alone, then before your family, your vo-ag class, in front of a mirror, and finally before a tape recorder. Above all, practice with a purpose—to improve every time you give the speech. Your job is to sell your ideas, and every word must be effective to do this. Don't memorize, but become thoroughly familiar with your subject so that you can stand before an audience and feel secure and at ease.

Use your hands to get and hold the attention of the audience as well as to lend emphasis to parts of your speech. You should develop a natural interest in getting your subject across to your audience. Use a podium and lean on it if you like to bring your audience closer. Rap on it for emphasis and walk around it for attention.

A good speaker must speak often, read widely, work hard, and be interested in his subject and the audience.



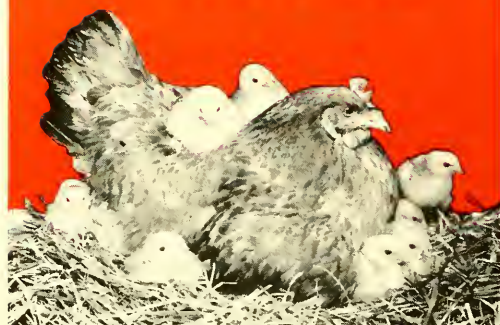
A 16-hour day is one good reason modern farmers invest in BFG nylon tires

Particularly when they cost less than most made without nylon. When the crops or the weather call for 16-hour-a-day tractor use, that's when you can't afford tire trouble. And that's when the nylon protection of B.F. Goodrich Power-Grips keeps you out of trouble. It's the same tough nylon cord used in heavy construction equipment tires. Stronger than steel, pound for pound, it shrugs off cuts and bruises from rocks, roots, and stumps. Moisture from the soil or ballast in the tire can't weaken nylon. When you *must* get the job done, BFG Power-Grips keep rolling. ■ Longer service life is built into the tread, too. Power-Grip cleats are 29% wider and 9% higher at the shoulders than any replace-

ment tractor tire we've made before. You get traction that lets you just "walk away" with the heaviest drawbar load your tractor is built to pull. And all that extra tread rubber means longer tire life. ■ Stop in and see the Power-Grip at your BFG Farm Tire Service Center. Your BFG man will be glad to make your acquaintance and show you around. He has two other new BFG tires you should know about: the new Multi-Ring front tractor tire, and the new Rib Implement tire. He'll be glad to answer any questions you may have on tires for modern farming, and how you can get longer, more efficient service from them. Stop in and see him soon. *The B.F. Goodrich Company, Akron, Ohio 44318.*



Naturally Better Protection



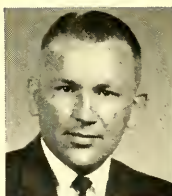
The protection a mother hen offers her chicks is an example of nature at work. And so is the protection Kendall Farm Lubricants offer for your equipment.

Nature played favorites when she put the world's richest crude oil under the hills of Bradford, Pennsylvania. All Kendall Farm Lubricants are refined from this choicest 100% Pennsylvania Crude Oil. Better right from the start. Better all the way because Kendall has worked only with this crude oil for over 80 years. Every Kendall product offers the Economy of Kendall Quality — important dollar savings through better, longer lasting protection of vital farm machinery.

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Lloyd Wiggins Now Directs FFA-NFA Peace Corps Project

THE FFA-NFA Peace Corps project in West Pakistan is now under way. Directing the work of the volunteers is Lloyd Wiggins, who serves as the Contractors Overseas Representative.

Prior to his present assignment, Mr. Wiggins taught vocational agriculture for five years in Oklahoma and spent six years in Ethiopia teaching animal husbandry at the Jimma Agricultural School.

The volunteers completed their training at the University of Minnesota and left this country on January 4. After two weeks in the field, followed by a two-week training program under the West Pakistan Government, they received their permanent assignments. They are working with the people in the agricultural communities of that country.

Past National Officer Receives Top Post at Swift & Company

DON Staheli, a native of Utah who served as national FFA president in 1951-52, has been appointed general manager of Swift & Company's feed department.

Staheli was graduated from Utah State University in 1953 with a bachelor of science degree in animal husbandry and received the University's "outstanding graduating senior" award. He received his doctor's degree in animal nutrition from the University of Illinois in 1956. After service in the U. S. Air Force, he joined Swift in 1958 and served in various management and research positions before being named to his present post.

During his student days, Don won honors as a member of livestock and wool judging teams and was president of the Utah FFA Association.

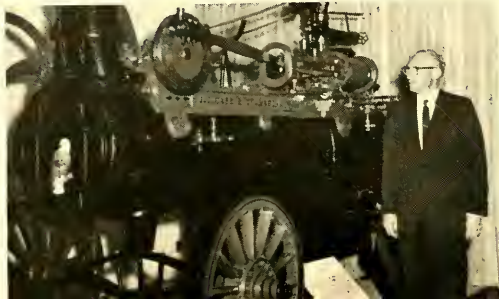


Dr. D. L. Staheli

Farm Implements of the Past On Display in National Museum

MANY old farm implements are on display at the Smithsonian Institution's new Museum of Science and Technology in Washington, D. C. Future Farmers and other high school groups who plan to visit the nation's capital this spring and summer will find it an interesting stop on their trip. The model shown here by Merritt Hill, president of the J. I. Case Company, is the first steam engine ever built by his company. Mr. Hill served as chairman of the FFA Foundation's Sponsoring Committee in 1959.

Merritt Hill and an early steam engine built for farmers.

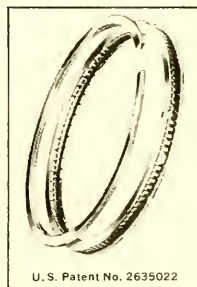




Get the full-time pulling power you demand with Perfect Circle Piston Rings

...THE BRAND MOST FARM EQUIPMENT MANUFACTURERS SPECIFY

Planting and harvesting seasons are short. To get your work done in time, you need engine power to the nth degree—Perfect Circle kind of power! ■ How do PC rings help give full-time power? Combustion seal, radial pressure, drainage, ring tension all combine to pay off in dependable performance. And healthy savings on oil costs, too. ■ Most farm equipment manufacturers specify Perfect Circle as original equipment and/or replacement rings. They are among the manufacturers of 127 brands of vehicles and engines who do so. For full-time, full profit power, install replacement rings made by Perfect Circle every time in the tractor, truck and automobile engines you overhaul.



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**Super-Torque Tractor
Tires Guaranteed to
OUTPULL
all others in the field
OUTWEAR
all others on the road**

Exclusive "Angle-Braced" lugs make the difference. They're built like corrugated steel—"Angle-Braced" to give your tractor more pulling power than any other general-use rear tractor tire.

Super-Torque lugs are longer, wider, deeper, too. So they really bite in, get more work done in less time, cut your fuel and labor costs as much as 15%.

And the Super-Torque is made with TufsYN—toughest, most abrasion-resistant rubber Goodyear ever used in a tire. Super-Torque with TufsYN, and a flatter tread design, stands up to the hardest road wear . . . delivers amazing traction in the field long after other tires are worn out.

GOODYEAR MAKES THIS PLEDGE:

"If, in a full season's use (90 days from date of purchase), your Super-Torque tires do not prove to have better field traction and show less tread wear than any other rear tractor tire when used under the same conditions for a like period of time, your Goodyear Dealer or Service Store upon return of the tires will refund in cash any payment made plus any allowances made for your traded-in tires. (This guarantee excludes comparison with special purpose Rear Tractor Tires.)

"Like all new Goodyear tires, the Super-Torque is also guaranteed by Goodyear against defects in workmanship and material without limit as to time or mileage. Any Goodyear tire dealer will make allowance on a new tire based on original tread depth remaining and current 'Goodyear Price'."

Prove to yourself how much more Super-Torque can give you. Stop in at your Goodyear Dealer's or Goodyear Service Store. Goodyear, Farm Tires, Akron, Ohio 44316.

GOODYEAR

Super-Torque, TufsYN—T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio



Exclusive Super-Torque Angle-Braced lugs, here painted white, are corrugated like steel, bite deeper, grip harder than any conventional lug.



CARNATION-ALBERS for more profitable beef



**7 out of 10 winners at major shows
get Calf Manna or Sho-Glo...or both!**

Let S.R. Litzenberg—owner of Hickory Hill Ranch, Waller, Texas—tell you what kind of results he gets with Albers Calf Manna and Sho-Glo.

"All of our show cattle here at Hickory Hill are fed Calf Manna. In our many years of fitting for show, manager Bob Davis and I have never run across anything that can take its place.

"We feed Sho-Glo, too. All of our calves get it in their creep rations. Sho-Glo

carries calves through the weaning period better. It makes it possible to wean them off their dams in a heavier condition. And calves fed Sho-Glo also build and hold superior bloom and healthier appearance. We wouldn't be without Calf Manna and Sho-Glo."

See for yourself. At your next major show, check behind the stalls of the winners. 7 out of 10 times you'll find bags of Calf Manna or Sho-Glo. Or both.



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Agriculture U.S.A.

A RED light blinks on, Future Farmers adjust their neckties, and "Agriculture USA" is on the air! From southern California, a new TV image of agriculture featuring the FFA is spreading across the country, and millions of viewers are having fun learning about modern agriculture.

Centering around "Agri-Quiz," a fast-moving game in which Future Farmers compete in agricultural subjects, the 30-minute show originates in Pacific Palisades near Los Angeles. Veteran TV Producer John Stearns brings agriculture in the form of milking contests, sheep shearing, calf roping, and potato harvesting into the homes of people who know little or nothing about modern agriculture. His mission—to introduce the rural world to the American public.

Future Farmers from chapters in the area man the panel, and an agricultural authority fires questions at them to test their knowledge, while TV viewers watch and learn at the same time.

Through a growing list of 14 major TV stations, Producer Stearns and his Future Farmer assistants are telling America that 40 percent of its industry is related to agriculture, that agriculture is NOT for the semiskilled and semieducated, and that vegetables come from places other than the corner supermarket.

Personal letters from 30 governors, 35 U. S. senators, four cabinet members, and leaders in all walks of life have come into Stearn's office. Perhaps President Johnson best summed up the public's appreciation for this public service by saying, "The program 'Agriculture USA' is presenting the story of our nation's agriculture and the people in it in a most entertaining fashion. Congratulations. . . ."

Agricultural question busies FFA panel.





**Stop for meals. Stop for sleep. But no stops
for adjustments. Now you can harvest non-stop!**

These are the sensational new Massey-Ferguson Combines that breeze non-stop through every crop, from grass seed to corn. Tank more of what you grow; leave less in the field. And get cleaner grain that grades higher.

Because these are the ones you can fine-set to meet changing crop conditions, right on-the-go. With 18 controls at the driver's seat, you can set cylinder speed, concave spacing, table and reel heights—make every important adjustment, with no time-wasting stops!

BIG—MF 300 . . . up to 13 ft. cut



All 3 combines have Saddle Tank Design to hold more bushels, give better balance, traction and handling ease. With all 3 you have an unobstructed view all around. Diesel or gas models . . . with various table sizes, or with new heavy-duty Corn Heads.

See all three! The big MF 300. The new, bigger MF 410. And the new MF 510, biggest MF Combine ever! And ask how you can save with the low-cost MF Time Payment Plan. Massey-Ferguson Inc., Detroit, Michigan.

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BIGGER—MF 410 . . . up to 18 ft. cut



BIGGEST—MF 510 . . . up to 20 ft. cut





Plastic pipeline brings raw maple sap down the hill to Andy Ward's sugarhouse.

By Paul Weller
and
Melvin Somers

Maple-Flavored

SAP IS running along the snow-covered ridges of the Green Mountains in Vermont. Towering sugar maples are putting forth their sweet syrupy juice—one of the few agricultural products in the U. S. that are not overproduced.

There's a new challenge in modernization awaiting the tradition-bound maple industry in the Northeast. The answers to maple-flavored profits are being found in plastic pipelines, oil-burning evaporators, central processing plants, and producers such as Future Farmer Andy Ward of Danville, Vermont.

Interest in the maple industry came early for Andy, even before his enrollment in vo-ag at Danville High School. By the time he was eight, he was beginning to tap a few trees near the house

for a hobby. It began to grow, and by the time Andy was in the seventh grade, he and his father built a small red sugarhouse in their backyard for Andy to use. His operation consisted of a used evaporator and about 35 trees.

When the sap began to run around March 1, Andy would make his rounds with a hand bit to tap his trees. Metal spouts were driven about three inches into the tree, and 14-quart buckets with covers were hung on each spout. Larger maple trees had two and three taps, depending on their expected production.

As mild days and cold nights started sap flowing into his buckets, oftentimes filling them in less than a day, it was gathered in 10-gallon milk cans and placed in a gathering tank mounted on a sled. When all buckets were emptied, Andy took tractor and

sled down the hill to transfer the sap into the 250-gallon storage tank just outside his sugarhouse.

Enrollment in vo-ag and an increasing number of trees to be tapped brought mechanization to Andy's maple syrup operation. To make a profit, he would have to expand and find a way to reduce labor. By his sophomore year in vo-ag, he had expanded to 150 trees and had bought a larger 2- by 7-foot evaporator. "Many nights I did my homework while boiling sap," he told us.

Andy's first step was adding a plastic pipeline to eliminate the long rounds through snow to empty his buckets of sap. Threading its way from tree to tree, the plastic pipeline fits into each spout, then continues downhill to the storage tank. Sap flows by gravity at the rate of nearly 7,000 gallons per



With a compact, engine-powered bit, Andy taps trees in minutes. Covered sap buckets are downhill from his sugarhouse.



Andy carefully installs plastic pipeline to sugar maples. Sap flows gravity through tap and pipeline to storage tank.

New England maple syrup producers such as FFA member, Andy Ward, are finding they must expand and modernize to maintain their profits.



Another stick of cordwood goes into the evaporator. Sap enters far end of pan from tank and is boiled here at rate of 40 gallons for each gallon of syrup.

Profits

six-week season, eliminating the long hours spent in the snowy woodlots. Each winter before the sap runs, Andy installs the pipeline. No longer does he have to bother with frozen sap on the spouts or trees on steep slopes that couldn't be reached with the tractor and sled.

Down at the sugarhouse a concrete floor eliminates the chance of the dirt floor thawing, making the sap level uneven and burning one end of his pan. The 2- by 7-foot evaporating rig boils the sap at the rate of 10 gallons every 15 minutes. Sap is gravity fed into the shallow pans above the stove, alternates through baffles, and evaporates out some of the water content of the sap. Thirty to 40 gallons of sap will make Andy one gallon of maple syrup. Cord wood stacked outside is burned at the

rate of five cords for every 100 gallons of syrup.

During peak periods of the five- to six-week season, Andy spends time at the boiling pan testing the heated syrup with an hydrometer. Dunked near the drawing-off spigot, the instrument registers the specific gravity of the boiling syrup, insuring that the weight per gallon is at least up to its required minimum of 11 pounds per gallon.

Most of Andy's maple syrup is taken hot from the evaporator and put in gallon cans for sale. Drawn and sealed hot, it will maintain its quality longer. Quality is important in maple syrup, and Andy takes great care to grade each batch of freshly boiled syrup. Test vials with different grades of syrup are compared according to color, a light amber-colored syrup grading Fancy. Lesser grades are A and B. Each can of maple syrup leaving Andy's sugarhouse carries the proper grade and weight.

This past season over 200 gallons of pure Vermont maple syrup left Andy's

backyard sugarhouse for local and commercial outlets. At an average price of \$5.50 to \$6.00 per gallon, Andy is moving into a full-time operation. Over 2,500 trees of his own and a larger 6- by 18-foot evaporator are becoming a reality. The new evaporator will boil sap from up to 8,000 trees, so the Future Farmer plans to rent trees on adjoining farms to add to his operation. In the sugar maple industry this is called "central processing" and means that several lots of trees will be tapped to supply one sugarhouse.

There's a new 20- by 30-foot sugarhouse being planned to replace the now outgrown house built six years ago. The larger evaporator, the nearly 6,000 trees Andy plans to collect sap from, and the two men he hopes to hire are proof of the former Star State Farmer's success in the maple industry. Beneath the picturesque Presidential Mountain Range, Andy Ward is expanding to meet the challenge of the future.



FOR MANY hauling needs, a used pickup truck is just as satisfactory as a new one—and you can buy the used one at a considerably lower price. You'll need to do some careful shopping, though, to find a true bargain.

You can tell a lot about a used truck without moving it. After checking such readily visible items as tires and body sheet metal, open the engine compartment. Even if the engine is clean and free of oily dirt, don't assume that it's in first-class mechanical shape. If the truck is on a dealer's lot, he may have cleaned the engine of a heavy coating of grime.

Remove the dipstick and check the condition of the oil. If the oil is extra heavy when it is cold, it may have been used to cut down oil use resulting from excessive engine wear. Water in the oil gives it a milky appearance after the engine is started. This may be caused by a leaky head gasket or a break in the walls separating the oil and water.

Check the condition of the front end and steering system by jacking up one wheel, grasping the tire, and shaking it in and out. If the wheel tips in, it usually indicates a loose knuckle or a bent axle. While the wheel is jacked up, remove it and check bearing condition and thickness of brake lining.

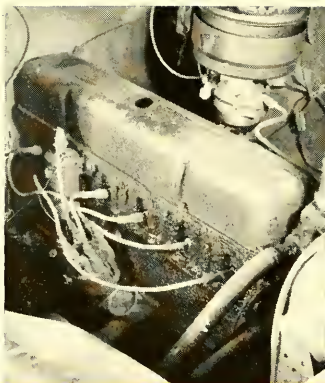
After reinstalling the wheel and removing the jack, move the steering wheel while watching the front wheel. The distance you can move the wheel back and forth before the front wheel moves is a measure of the free play in the steering linkage. This can usually be taken up by a simple adjustment; and tie rod ends and drag links aren't expensive to replace. However, other parts of the steering system are more costly.

Uneven tread wear on the front tires indicates poor steering alignment. Such misalignment can be corrected by an inexpensive alignment job—but only if the parts are not worn excessively.

The rear axle, wheels, differential, and driveshaft should be checked carefully. Grease or oil on the inside of the rear tire usually indicates a leaky axle seal or a leaky hydraulic cylinder. Either one will soon ruin the brake lining.

Shake the driveshaft to check for loose universal joints. Also look for signs of leakage where the shaft enters the differential case and transmission housing. Replacing seals at these locations may be expensive.

While inspecting underneath, check the springs for signs of breaks and the frame for reinforcements which would have permitted overloading. Also, carefully check for frame straightening made necessary by a wreck. Once a frame is sprung in a wreck, it usually



Engine block covered with grease and lost oil filter cap indicate neglect.



Little former care shows in torn seat, broken turn signal and glove box latch.

How to Get A Good Deal on a **USED PICKUP**

By
Melvin Long



As engine warms, oil pressure should remain high, while ammeter decreases.

is difficult to maintain satisfactory alignment of front and rear axles.

After a truck passes these stationary inspections, arrange with the dealer for you to drive it 15 to 20 miles. When you start, the oil pressure should be high and the generator charging rate high. As the battery recharges, the ammeter reading will decrease, but oil pressure should stay up.

Check for color of exhaust coming from the tailpipe. Black smoke indicates an overly rich adjustment of the carburetor. This can be easily corrected. However, bluish smoke indicates high oil consumption because of leakage past engine bearings or piston rings—usually an expensive condition to correct.

Check engine temperature several times. If the engine overheats, the cooling system is clogged or leaking. Listen for unusual noises such as clicking or howling of gears, knocks, thumps, or growls from the truck. In general, any noise beyond a minor clicking of the valve tappets is a symptom of troubles which are expensive to repair.

Clutch and brakes can be checked by stopping the truck, setting the hand brake, and trying to move the truck in low gear. If the engine stalls, clutch

and brakes are probably in good condition. If the truck moves, the brakes aren't holding properly. And if the engine continues to run but the truck doesn't move, the clutch is slipping.

Check the brake hydraulic system by holding a steady foot pressure against the brake pedal. If the pedal slowly sinks, the brake cylinders are leaking. When the engine is warm at the end of the test run, check for engine or transmission oil leaks. These leaks are easier to spot if you place some old newspapers under the engine and transmission. If oil spots develop, check for the source of the leak.

Leaky gaskets at the oil pan, the rocker arm cover, or the push rod side plate are easily and inexpensively replaced. However, oil leaks from the front of the engine under the fan drive pulley usually indicate that the oil seals or main bearings are faulty. These are expensive to repair. Also, leaks where the shaft joins the transmission case are also likely to be costly to repair.

The fact that the truck has been used is the reason for a lower price. Look for one in which the selling price plus the cost of needed repairs add up to your best buy.



Farming His Way Through College

Dividing his time between farming and college, Walter Threlfall is using money earned on the home farm to pay all of his college expenses.

TO MOST Future Farmers, a supervised farming program is the beginning of a successful career on the farm. But to Walter Threlfall of Prospect, Ohio, it is a ticket to college and veterinary school. He is literally farming his way through college.

Walter became a Future Farmer at Prospect High School with three Shropshire ewes, two Yorkshire gilts, and three acres of corn on his father's 80-acre farm. His father, being an off-farm employee had the farm in a 50-50 share agreement with a neighbor. Even as a Green Hand in FFA, Walter was aiming for a college education, and he was determined his farming operation would pay his expenses.

By the sophomore year, the Future Farmer owned four sows, averaging 11.4 pigs per litter, and three acres of corn. Advisor J. W. Watkins was encouraging Walter to expand into swine to realize more profit from the home farm. His five ewes were bringing him a small profit, in addition.

When he was graduated from high school in 1962, Walter had accumulated 10 brood sows, gone into a 50-50 farming partnership with his father, bought some machinery from profit from his hogs, and sold the sheep to give him additional time for college study. There was some money in the bank from hog sales, FFA livestock exhibitions, and custom work done in the summers between high school classes.

In the fall of 1962, after receiving his State Farmer Degree, Walter enrolled for his long-awaited college work in the nearby Marion branch of Ohio State University. Money saved from his high school vo-ag programs paid his first semester's expenses.

Streamlining and adjusting his farming operation to meet a full college



Walter Threlfall's Yorkshires have proven to be his best source of income for his college. His swine operation is planned so that the work can be done on weekends.

schedule was Walter's main problem. He maintained his hogs and corn, shifting the swine operation from registered stock to a commercial cross-breeding program requiring fewer time-consuming records. His Poland China boar and Yorkshire sows efficiently produced feeder pigs and 200-pound hogs.

The hog operation was adjusted so that most work could be done on weekends when Walter was home from college. Self-feeders and automatic waterers cut down on labor during the week, and Walter's father needs to fill the waterers only every two days from a nearby well. He also checks the hogs at night, but little other labor is necessary during the five days Walter is away at Ohio State.

Before Walter left for college, he worked out an agreement whereby his father receives 25 percent of the hog profits for his weekly supervision and use of the building. A similar agreement with the cropland pays Mr. Threlfall 20 percent of the profits from crops Walter raises.

Walter has even scheduled his sows to farrow between quarters at college. Farrowing crates and his personal supervision have resulted in not a single pig lost by crushing at birth. In order to harvest his crops during the summer, since he also attends summer sessions, Walter borrows his uncle's machinery with the understanding that he will help

him in return for its use. The corn is plowed, planted, and picked on weekends.

A typical weekend begins on Friday evening when Walter arrives home from the 40-mile drive from college, now at Columbus. He checks all livestock, plans his weekend activities, then settles down to study. Saturday is usually taken up with grinding feed for the self-feeders, separating any hogs that are ready to be weaned, cleaning farrowing crates and bedding pens for the next week, cleaning water fountains, and again some college study. Sundays during the winter are taken up with finishing Saturday's chores, making last-minute checks on the coming week's chores, and a few hours of studying.

It's a busy schedule, but it has paid all of Walter's college expenses. He recommends it to any Future Farmer who is in need of cash for school. You'll find nearly 80 hogs on Walter's farm today, 60 of them are 160-pound shoats nearly ready to sell. This spring there will be several acres of corn and a dozen sheep with his swine program.

And as Advisor John Watkins says, "I believe any FFA member planning on college should seriously consider using his farming program to finance it, both as a savings plan while in high school and as a continuing income while at college."



THE MOST fabulous trip in the world! You can't buy a ticket—it has to be earned. The way you earn it is to work your way up through FFA achievement to become a national FFA officer.

And even if you don't make that grade, there's the consolation of knowing that the six young men who do will be doing the best possible job of representing the 396,000 Future Farmers. This is the annual Goodwill Tour of your national FFA officers.

The 1964 tour began on February 2 and ended on March 4. It included stops in 12 major cities and contacts with hundreds of outstanding leaders from business, industry, and national organizations.

Would you like to sit around a table with the board of directors of a major corporation and discuss agricultural and industrial subjects with them, or address 100 or more executives in a special

meeting called to give you this opportunity? How would you like to watch a tire being built from the raw rubber and cord to the finished product? Have you seen a tractor transmission take form as you walk leisurely down an assembly line?

If the tour sounds exciting, it is. But these traveling ambassadors of goodwill are not just having a good time. They're on their toes every minute of every day, always putting a best foot forward to impress the people they visit, showing them the quality of young men being developed through vo-ag and the FFA.

Praise is heaped on them every day. "When I see young men like these, I'm no longer worried about our new gen-

eration taking their places to keep our country free and strong" is the type of comment often heard from business leaders. "Every time I meet a set of FFA officers I wonder how the organization can come up with their equal, but every year they get better" is another typical comment.

These words are obviously sincere, but the officers long ago adopted a pact among themselves: to do the best possible job they can. Whenever there are a few moments to spare, the officers get together with Executive Secretary W. P. Gray to discuss how they might improve their presentations for tomorrow. No punches are pulled as the "team" reviews its errors and shortcomings.

National FFA Officers'

From Capitol Hill and across the nation, FFA's leaders spread words and deeds of hearty goodwill.

... Starting in Washington, D.C., and visits with their home state Congressmen ...



National FFA President Nels Ackerson lunches with Representative Roudebush, jokes with Indiana Senator Hartke.



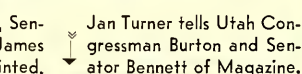
← Tennessee Senator Walter proves a serious listener to Marvin Gibson.
 ↘ A serious moment for James Teets and West Virginia's Senator Byrd.



← Representative Belcher, Oklahoma, talks of home area with Jon Ford.



↘ Two West Virginians, Senator Randolph and James Teets become acquainted.



↘ Jan Turner tells Utah Congressman Burton and Senator Bennett of Magazine.



... On to Richmond, Virginia, and the beginning of a month of busy activities and schedules ...

An informal chat with Virginia Governor Harrison in Richmond highlighted the beginning of a trip to 16 cities.



Nels Ackerson addresses members of Virginia's Legislature at beginning of tour.



... To Philadelphia and the Delaware Valley FFA luncheon with leading businessmen ...

Charles Beck, president of Philco Corporation and former Future Farmer, addresses 200 businessmen at Philadelphia.



Goodwill Tour

By John Farrar

Their presentations, incidentally, are the same three times a day; tell how they developed their farming programs and how they advanced in leadership—a maximum of three minutes but often cut to one or two minutes. It's easy; just write down what you intend to say, memorize it, relax, and keep saying it for five weeks.

Trouble is, most of their meetings are informal, and a memorized speech begins to lose its spontaneous and sincere manner. They must vary their talks from day to day, adjusting to fit the program and to interest the people they are meeting.

Then there's the unexpected, like at the Cleveland, Ohio, Advertising Club

meeting last month when, as a joke, a representative presented the officers with Beetle wigs and insisted they pose for a picture. This situation separates the men from the boys. President Nels Ackerson walked up to the microphone, removed the wig, and said in a joking manner: "I don't want to appear conceited, but I think we look better without these things."

The round of applause that followed gave proof that Nels, in a situation that could have been embarrassing, had turned the tables completely. Without offending those who dreamed up the joke, he had shown that Future Farmers are serious students planning for tomorrow rather than playing for today.

The Goodwill Tour is an important public relations activity for the FFA, helping to stimulate contributions to the FFA Foundation. It serves as a reminder to urban people that agriculture is a dynamic and vital industry.

... A few other stops and points of interest!

Jim Osburne, guide at General Tire and Rubber Company, Akron, points out unique circles on a company tire to officers and to W. P. Gray, executive secretary.



In Akron, Ohio, national FFA officers spend a relaxing evening in home of Raymond Firestone.



Koppers Company played host to national officers and Pennsylvania's president, Carl Ginder, right, in Pittsburgh.

Ohio FFA president points out a real banana tree growing in greenhouse of Cleveland technical high school.



A ride around the New Idea plant busies national officers near Coldwater, Ohio, as implement firm was host.

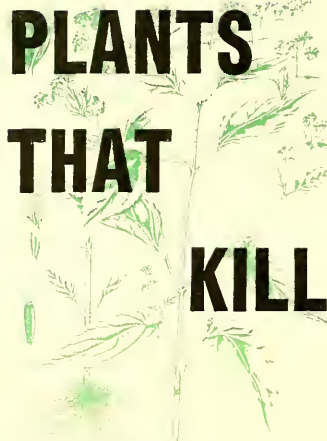


"And this machine . . ." American Can Company official tells group in New York, during five-day visit to the city.

President George Vila, third from left, tells Nels that U. S. Rubber also farms.



PLANTS THAT KILL



By E. M. Leffert

IN WESTERN states, annual losses of livestock are exceedingly high: to poisonous plants, mostly locoweed. These losses can be reduced—if you know what to look for. When livestock raising is dependent upon native vegetation, stockmen should know the symptoms of plant-poisoned animals.

In spring before the grass is green, or in autumn after grasslands have browned away and become scarce, these plants kill regularly and with precision.

Pasturing in wooded places during a drought should be avoided until careful investigation of area plant life can be made. The fact is, livestock are often forced to eat plants they would normally leave alone because of the scarcity of good forage.

Generally, ditches, wooded areas, river banks, and marshy regions are most apt to harbor these botanical saboteurs. Here you will find the innocent-looking white snakeroot, the water hemlock, the bracken fern, or the delicate and fragile-looking Dutchman's breeches, to name a few.

White snakeroot is common throughout the Midwest and central states and is responsible for heavy losses of sheep, mules, horses, and cattle. Three pounds of the plant is a fatal dosage for a sheep. The three-foot-tall plant contains a toxic material called "Terमतol."

Terमतol invades an animal's system through its stomach and even passes into the milk. In this way, suckling young and humans, too, are poisoned. A man who has witnessed a snakeroot poisoning is not likely to forget the primary listlessness or the severe trembling that follows. Other symptoms are constipation, labored breathing, and finally, inability to stand. Death usually comes in a day or two.

The deadliest of all native plants is the water hemlock. This wet-land killer takes its highest toll in the early spring and fall. Luckily, the plant is easy to spot. Its leaves are small, with saw-like notches along the edges. A purple stem helps further in identification. Hogs, sheep, and cattle turned loose to forage too early in wet-lands may not live to see the summer.

This whole plant is poisonous, but the roots, seeds, and young shoots are the deadliest. Growing up to six feet tall, it is relatively easy to find. These plants have tuberous, fleshy roots which resemble sweet potatoes. Hogs, particularly, will dig them up as food. The roots contain a substance so poisonous that a small amount will kill a large cow in hours. The symptoms of hemlock poisoning include frothing at the

mouth, running in circles, extremely violent convulsions, bellowing, and groaning. The convulsions almost always end in death.

Wild cherry trees are common throughout the country, and the young shoots are poisonous at all times. One peculiar quality, however, is that the leaves are dangerous only when wilted. When dry, the leaves rapidly lose their poisonous properties. As little as one pound of cherry foliage can be fatal.

Prussic acid is the poison here, and it causes animals to stagger and weave about. Later, heavy breathing and falling occur, followed by coma and death. The poisonous cherry varieties include the common chokecherry, the pincherry, and the wild black cherry. Poisoning by wild cherry usually occurs after storms have knocked down branches and the leaves wilt.

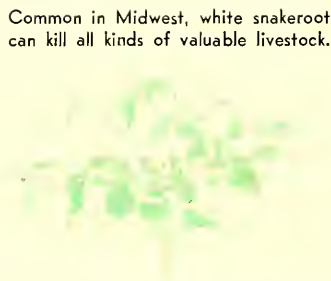
The brake or bracken ferns are common in dry, sandy, or gravelly soil, and especially old pastures and open woodlands. Late in a dry season, cattle will eat brake ferns because normal forage is scarce and these plants are among the few that remain green. While cattle are not fond of the brake ferns, they graze them heavily under dry conditions. Unlike the wild-cherries, the brake ferns do not lose their poisonous qualities with drying. Hay that contains large amounts of this fern should not be fed.

Brake poisoning is slow and subtle, with the symptoms generally not appearing for about three weeks. Then, extremely high temperatures and bleeding from the nose occur—followed by internal hemorrhaging.

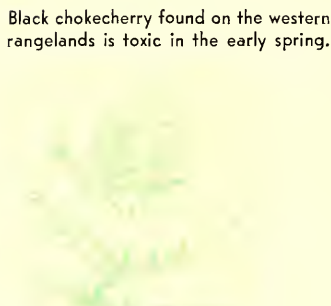
The delicate-looking Dutchman's breeches is a real deceiver with its finely dissected, sage-green leaves and nodding creamy-white flowers. It inhabits moist woodland pastures and the leaf mold of open woods. It ranges all the way from Nova Scotia to Kansas, Minnesota to South Carolina. Wherever it is found, it is dangerous.

Again, fatal cases usually occur in the spring, with the danger passing by the end of May. This plant finishes its bloom by June and then quickly withers away and dies. If an animal froths at the mouth, moans, and suffers convulsions, and you know that water hemlock is not present, this plant could be the culprit. Livestock reaction to both is similar.

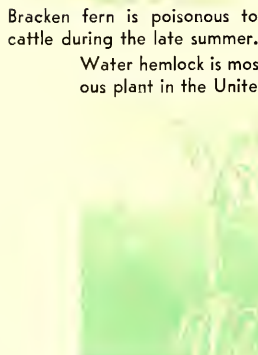
It is possible to confuse cases of plant poisoning and mineral poisoning. If a case is diagnosed as poisoning and there are no paint cans, fertilizer (especially nitrate of soda), garbage containing matches, soap powders, or coffee grounds lying about, get busy right away. Root out the dealers in death. Your stock can then live normal, healthy, productive lives.



Common in Midwest, white snakeroot can kill all kinds of valuable livestock.



Black chokecherry found on the western rangelands is toxic in the early spring.



Bracken fern is poisonous to cattle during the late summer.

Water hemlock is most poisonous plant in the United States.

Danger!

Slow-Moving Vehicle



THIS PAST summer near Fremont, Ohio, two Future Farmers pulled their tractor and chapter wagon loaded with tomatoes onto a four-lane highway. On the rear of the wagon was a brightly colored triangular emblem. Immediately, fast-moving cars and trucks began veering over into the passing lane a considerable distance behind the slow-moving vehicle.

Motorists near the northern Ohio town were getting their first glimpse of the new Slow-Moving Vehicle safety emblem being distributed by FFA chapters in many states in cooperation with Ohio State University. For nearly a year, the unique emblems have been appearing on the rear portions of tractors, wagons, and harvest machinery in many sections of the country. Their purpose is to warn motorists that ahead of them is a farm vehicle moving at little more than a snail's pace.

Over two years ago, Kenneth Harkness of Ohio State's agricultural engineering department made a survey of Ohio accidents that involved slow-moving vehicles. The grim results showed that out of 720 accidents, 73 percent involved tractors and machinery, almost all occurred during the daytime, and two out of three were rear-end collisions. He set out to design an emblem that would warn fast-moving motorists that ahead lay an unsuspecting farmer on a slow machine.

His emblem is a 14-inch-high equilateral triangle with a bright orange fluorescent material that is especially effective in daylight. A wide red border on all three sides is reflective in the path of auto headlights at night. Designed to be mounted on the rear of slow-moving farm vehicles from three to five feet above ground level, it warns motorists up to one sixth of a mile away. This would be ample time for a driver traveling as fast as 70 miles an hour to

slow down and safely go around the farm vehicle.

Designed for identifying vehicles that travel less than 25 miles per hour, the colorful emblem soon began to gain national fame. Faribault Future Farmers were the first to use the SMV emblems in Minnesota. In the fall of 1963, they assembled 50 emblems and distributed them free to area farmers. They had found, as Advisor Paul Day told us, that many farmers do not purchase safety devices, even though they know they are necessary. Many of the farmers have found the emblem to be a definite aid to motorists, and some even gave donations to help defray the costs.

So successful was Faribault Chapter's SMV emblem program that they plan to distribute 100 this year, and are seeking a fund-raising activity to help pay the costs. An area farmer who received an emblem last year has even designed an economical frame so that he can transfer his emblem from one machine to another.

The Fremont, Ohio, Chapter purchased 100 SMV emblems and is selling them at \$2.00 each to area farmers. After all costs are subtracted, the chapter nets about 33 cents per emblem, according to Advisor Howard Nowels. Best advertisement, members report, is word of mouth, since nearly all farmers who are using the emblems are high in their praise for them. Chapter members are now looking for a satisfactory method of mounting them so they can be moved from one vehicle to another.

And across the state at London, Ohio, over 55 of the SMV emblems have been sold to farmers by the FFA and Young Farmer chapters. "For something new, they seem to be well accepted," Advisor Bob Phillips explained in a letter. He plans to distribute more this summer before corn harvest.

And so it goes—an Ohio agricultural engineer, a bright emblem, and FFA chapters across the nation are promoting a safety service to farmers that they hope will some day become as common as the familiar X-shaped arms at railroad crossings.



Future Farmers explain the SMV emblem to classmates at Fremont, Ohio.

Larry Pryor, Portland, Michigan, looks at emblem on tractor of Doug Rogers.

Michigan Farmer Photo



The Sugarcane Chapter



A Florida chapter becomes one of the few FFA chapters to be successful cane growers.

CLEWISTON Chapter of Future Farmers, near the shores of Lake Okeechobee in south-central Florida, is an independent sugarcane grower. Quite a feat, when you stop to think what is involved in getting a cane quota, then raising and harvesting such a difficult crop.

It all began for Clewiston back in the spring of 1961, when an official of the United States Sugar Corporation stopped by the chapter to talk about the sugar industry. Cane growing is a sizable industry in this area of Florida, and it seemed natural that Future Farmers

would want to get more practical experience with the crop. Besides, the sugar corporation had always been a strong supporter of the FFA and its ideals.

Advisor R. L. Pape, company officials, and chapter members worked out a lease covering six acres of suitable land adjoining school property. Five of the acres were already in cane, the sixth acre unplanted. With company help, a six-acre sugarcane quota was obtained from the USDA, and by September of 1961, Future Farmers were planting the extra acre in purchased seed cane.

FFA members took complete charge of the operation. Tom Ridgill became chairman and record keeper, and each vo-ag class was assigned specific duties. Everyone was learning just how sugarcane had to be managed. Green Hands were responsible for cutting and planting the cane. They soon learned that cane must be cut as low as possible because the heaviest sucrose content is in the lower stalk. It was a ticklish job since cane cut too low would not sprout from the stubble to bring the next year's crop.

There was planned spacing of cane rows, borrowing the special furrow plow from a nearby farm for planting and

fertilizing the cane with the sugar company's recommendations. Sophomores in vo-ag had the cultivating and fertilizing duties, while juniors and seniors managed and learned to estimate cane tonnage, to test for sucrose content, and to calculate sugar payments in advance. All the while, Tom Ridgill filled chapter record books with details of what was being done.

An important lesson learned was that sugarcane is a stable agricultural crop to be depended on when all else fails. Drought made the chapter vegetables a flop; the cattle project didn't show growth; but the sugarcane netted over \$1,000 to the chapter the first year. This amount was realized after all costs, including the harvesting done by the company, were subtracted.

By 1962, the five acres harvested produced 174.53 tons of cane with an average sucrose content of 15.83 percent. The cane was sold to the U. S. Sugar Corporation under a pricing formula set by the U. S. Department of Agriculture. The sixth acre was left for seed cane to plant in September for the 1963 crop.

When the huge harvesting machines had pulled off Clewiston's cane land this past spring, over 210 tons of cane had been harvested with an average sucrose content of 16.9 percent. They figured a net profit of \$1,418 and could show a lot of added experiences in growing sugarcane. In fact, so successful has been the sugarcane operation that a new quota has been obtained and members will harvest 7.5 acres of cane this spring.

Field trips through sugarcane research laboratories add to the training Clewiston Future Farmers are receiving on the vast sugar industry. Their own cane operation has brought them much closer to this important part of Florida agriculture. ♦♦♦



Sugarcane cut and ready for loading.

Special equipment loads the cane in the field for transportation to the mill.



I WAS surprised to find out that radio stations want such simple news."

"Without this meeting, I would have had little idea of what I should do."

These are typical remarks from "graduates" of the unique FFA reporters' workshops, which are offered to chapter and sectional reporters throughout Illinois by the Extension Editorial Office at the state university.

Reporters' workshops have proven to be very popular in Illinois. In fact, about half of the state's FFA reporters have attended the workshops each session for the past three years. "They help fill a gap in much-needed communications training of vo-ag students," according to Ralph Guthrie of the university staff.

Here is how a typical reporters' workshop was conducted last year in Illinois:

Instruction was given to reporters in four-hour, after-school workshops in five locations throughout the state. Reporters met with the author during the first two-hour session for instruction and practice in writing news stories. They worked exercises in using simple words, reporting facts directly and concisely, and organizing the facts for a story. After some practice in writing story leads, each reporter wrote a news story on the workshop which he attended.

At the same time, the advisors were meeting separately with Jim Evans, also from the Extension Editorial Office. Their study was a discussion of the vo-ag teachers' public relations responsibilities and problems.

Reporters and advisors then met together for the last two-hour session on exhibits, photography, radio, and television. Another instructor used a set of slides of exhibits to illustrate how exhibits can help a chapter's public information program. Reporters could select good exhibits from poor ones by judging a ring of four exhibits from the slides.

Sessions on photography emphasized composition, since interesting and well-arranged pictures require considerable thought by the camera operator before he presses the button. The group practiced composing pictures, using a Polaroid camera and an opaque projector to show the finished picture on a screen.

Radio and television stations want and need FFA and vo-ag news. Tape-recorded interviews with local radio and television news directors listing the types of news desired were part of this training.

Each reporter participating in a workshop received a copy of the 26-page *Reporter's Handbook*, developed by the Illinois Extension Editorial Office as a reference handbook for FFA reporters.

During the past three years, attendance at the workshops has ranged from



The author, right, goes over "Reporter's Handbook" with workshop participants.

Reporters in Training

Illinois Future Farmers learn lessons in communications at unique FFA workshops.

*By
Dave Beckenholdt*

190 to 250. Last year, for example, 190 Future Farmers from 133 chapters participated. Advisors who have attended generally express enthusiasm for the program, and almost half of the 106 advisors at the 1963 workshops had attended the year before.

The reporters' workshops have grown out of a close working association of the Extension Editorial Office and vocational agriculture.

Finding that FFA sectional reporters needed training if they were to help with this news coverage, two-day workshops were held in January of 1958 and 1959 at Urbana. In 1960, the workshops were moved to the fall and held on a district basis.

The basic objectives of the FFA reporter project are:

1. To improve reporting of FFA and vo-ag activities.
2. To improve the communication abilities of FFA members and advisors.
3. To improve the quality and effectiveness of official FFA publications and newsletters.
4. To foster a better understanding between farm and city people.

The FFA reporters' workshops are only part of the project's activities. In addition, work includes preparation of FFA communications training aids, help with coverage of statewide FFA and vo-ag events, and editorial assist-



A Polaroid camera was used to teach points about photograph composition.

This display helped reporters learn materials necessary for FFA exhibits.



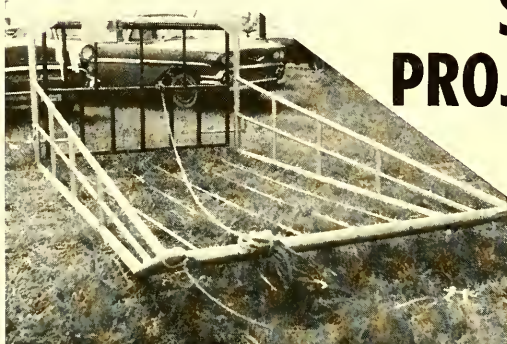
ance for sectional newsletters and the state FFA magazine. Any FFA reporter or vo-ag teacher also can get help or advice on his reporting or public relations problems.

A monthly newsletter, *Reporting FFA News*, is sent to all FFA reporters. It includes an events calendar for the month and timely tips on how the reporter can do a better job. The project has helped increase the public's awareness of vo-ag and the FFA. ♦♦♦

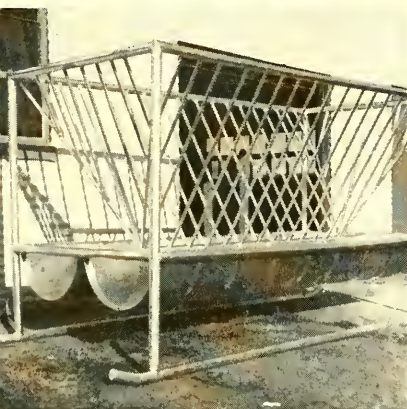


This tandem-wheel implement trailer was grand champion at Kansas State Fair in 1962 and features floating, individually mounted axles. Floor is 2- by 12-inch planks bolted to a bed frame of 3-inch channel iron. Main stringer beneath floor is old truck frame. A 4 1/2-inch pipe on rear of trailer makes loading easier. Jack on tongue is from a cider press; fenders are of 1/8-inch floor plate.

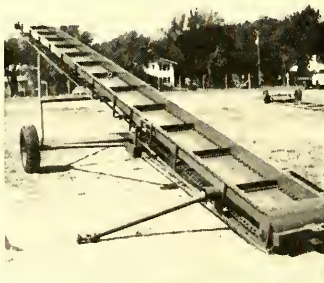
TRY THESE SHOP PROJECTS



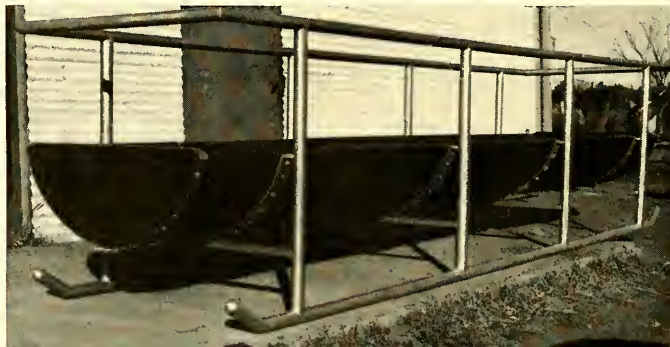
A brightly painted bale sled for windrowing bales of hay or straw when pulled behind the baler. Designed by Miltonvale FFA members, it's made completely from pipe. Main frame is 2 1/4-inch pipe, plus 1 1/2-inch pipe for reinforcements. Rods on bottom are 3/4 inch in diameter. Rope trips rear gate to release bales onto a pile. Ends of skids have been orange-peeled, welded over, then ground smooth.



Three steel barrels cut in half form two rows of troughs in this shop-made hay feeder. Welded end to end and edges smoothed with grinder, barrels can be used for feed or minerals. Complete frame is 2 3/8-inch pipe mounted on two runners. Rack is made from 1/2-inch pipe welded in center to cross-piece of larger pipe. Feeder is 12 feet long, 4 feet wide, and cost \$45.



Portable feed bunk features same 2 1/4-inch pipe frame and runners. Top frame corners are cut at 45-degree angle for tight fit. Angle iron cross braces are welded to frame uprights to hold wooden bunk. Feed bunk is made from 2 by 4's cut on edges to 6-degree angle to make a tight-fitting trough. Steel bands around bunk are rims from wooden wagon wheels, welded to uprights for support. Sheet metal strips at each end of bunk have adjustable bolts. All wood is thoroughly coated with waterproof redwood stain for protection. Total cost was under \$80.

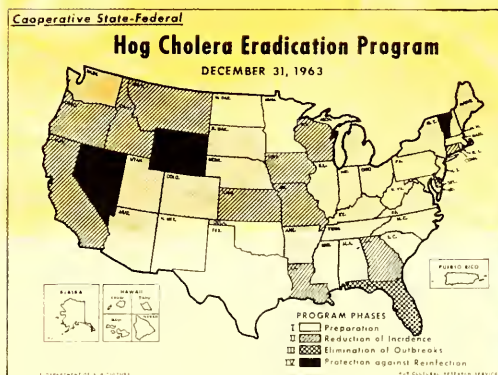


FOR years, vo-ag shop projects from the Miltonvale, Kansas, Chapter have taken top awards at the Kansas State Fair. Behind the scenes is a program of Future Farmers designing equipment to fit their individual needs, careful workmanship, and close supervision by Advisor Billy Fuller.

Following are five pieces of farm equipment that were designed and built by Miltonvale Future Farmers. Most of them are award winners, and all of them play an important part in the farming programs of the members who built them. Study the photographs and descriptions below, and see if you can build similar projects in your vo-ag shop.

Entire 28-foot bale elevator has been made in vo-ag shop with exception of chain, PTO, and wheels. Galvanized metal conveyor pan was crimped in local sheet metal shop in 10-foot sections. Wheels and spindles are from junk yard; hand-cranked winch is shop-made. Paddles, frame, and hitch come from scraps.

Helping Combat Cholera



With pencil and survey. Future Farmers are gathering facts to help control hog cholera.



FFA members of the Geneseo, Illinois, Chapter question a farmer in Henry County, one of 745 contacted in two weeks.

DURING THE past year, teams of Future Farmers have spread across counties in the Midwest, surveys in hand, to help combat a disease that is costing U. S. hog producers over 50 million dollars a year. In Illinois alone, hog cholera caused the death of 2,000 hogs valued at \$40,000 in just two months, and it's costing farmers across the nation 45 cents for every hog they market!

To date, 40 states have joined the U. S. Department of Agriculture's fight to locate and control the costly disease. In these states, the eradication program is divided into four phases. Phase I, reporting and investigating all outbreaks, by surveys, is where Future Farmers have joined in to help.

First to help were FFA chapters in Macoupin County, Illinois, in the spring of 1962. County farm leaders began by organizing a hog cholera eradication committee, and FFA members from the eight chapters agreed to conduct the necessary survey. In early April, scores of Future Farmers armed with questionnaires, a county map, and a list of hog producers in each township made their rounds. It wasn't uncommon to find members using tractors to reach some outlying farm homes in the spring mud.

Within two weeks, the results were ready to be compiled in the state veter-

inarian's office in Springfield. Information such as the source of feeder pigs, the fact that few small hog producers vaccinated their swine, and markets where hogs were sold became the basis to begin the county hog cholera program. Macoupin County Future Farmers had contacted 838 hog farmers representing over 152,000 hogs within the short 14-day period.

Across the state in Livingston County, local officials and hog farmers followed their sister county's example. John Bartley, vo-ag instructor at Saunemin, became chairman of the county hog cholera committee and began to organize Future Farmers from the 12 FFA chapters in the county. Once again, blue-jacketed FFA members began the rounds of county farms to collect the important information. It was January, 1963, and despite the chilling weather, Future Farmers contacted 623 hog farmers.

Data revealed to county officials that only 63 percent of the hog farmers surveyed were vaccinating their swine against cholera. Twenty-one of the farmers reported cases of cholera within the past three years with a total of 624 hogs lost. Five farmers told the FFA members they had had cholera break out after vaccination. A critical factor proved to be the movement of feeder pigs.

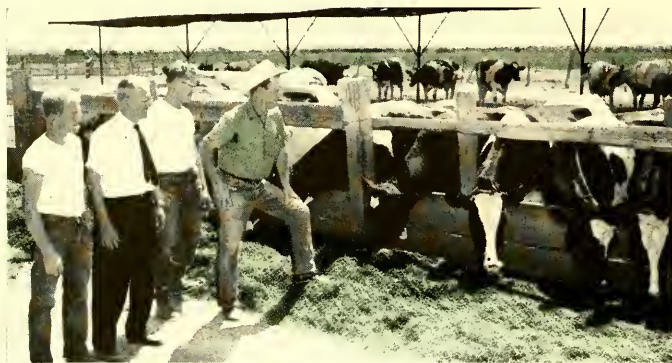
And in Henry County, Illinois, the nation's top hog producing county with over 585,000 hogs marketed each year, Future Farmers followed with their survey a few months later. "Each of the nine chapters covered its own school area, with some chapters contacting 85 percent of the farmers," Advisor W. C. Brokaw of Geneseo told us. His chapter had the responsibility of covering farms in a 200-square-mile area.

Across fences, in hogpens, and in farm kitchens, Future Farmers talked with 745 hog producers who had 225,000 hogs on their farms. Here they found only 61 percent of the farmers vaccinating all of their hogs against cholera, and 21 percent who never vaccinated at all. Farmers reported that 36 cases of the disease had occurred within the past three years.

Modern veterinary medicine has not produced a vaccine that is 100 percent effective against cholera, so surveys and studies must continue to prevent and control outbreaks. By quickly finding cholera outbreaks, then properly disposing of infected animals, officials hope to contain and control the disease. When the day comes that the dreaded disease is completely eradicated, Future Farmers will have played an important part in bringing it about.



A Loan Repaid



An important reason behind repaying the loan is the quality dairy herd. Jerry Dipple, Banker Don Stewart, Ernest and E. B. Dipple admire the Holstein cows.

Careful farm planning has helped the Dipples pay off a major loan a year before it was due.

IT WAS just over two years ago that two Future Farmer brothers of Chandler, Arizona, became the first to receive a new type credit from the Arizona Youth Farm Loan Fund. This past July, a full year earlier than expected, Ernest and Jerry Dipple returned to the Gilbert branch of the First National Bank of Arizona with their final payment.

How did they repay the loan so quickly? What type loan was it, and what have been the Dipple brothers' experiences with farm credit in their struggle to become established dairymen? It's best that we travel south of Chandler through the fields of cotton, irrigated alfalfa and herds of dairy

Ernest proudly holds a Holstein calf, typical of the fine replacement herd.



cattle to the Dipple farm to see for ourselves.

A study of the Dipples' records gives the story of this new loan fund. It originated some years back when Arizona legislators turned over unused funds from the Rural Rehabilitation Corporation to the State Department of Vocational Education to be used for loans to young farmers. The maximum age limit was set at 25; the loans could be up to \$20,000 for livestock, crops, or farm machinery; the applicant had to have vo-ag training; and he could borrow for up to five years. Ernest and Jerry Dipple had borrowed \$14,000 for three years.

With the loan in 1961, the Future Farmers bought 33 dairy cows to make a beginning in dairying. It was an uphill battle to establish a successful dairy operation with limited equipment, cows, and money. "It's a lot of hard work."

Father of the Future Farmers, E. B. Dipple, left, watches with Jerry as Ernest runs the self-unloading wagon to feed the evening meal to their 200 dairy cows.



Ernest readily agrees. "But if you're really serious in becoming a dairyman, your rewards will far outweigh the long hours and effort."

With careful planning, the brothers grew their own hay and green feed to get the most economical roughage for the growing herd. They even grew their own barley to be mixed with other purchased concentrates.

"The search for just the right calves, the long hours studying the pedigrees of the sire and dam, watching the calf grow, and selecting and breeding to constantly improve the herd are quite a job," Ernest explained. "But when you like what you do—and we like dairying—well, there is nothing else we'd rather do."

An eye to efficient management and a dedication to complete farm records brought back profits that began to increase with the growing herd. Today, Ernest and Jerry have entered into a partnership with their parents to establish a herd of nearly 200 head of cattle. In their modern dairy plant are a pipeline milker, a refrigerated bulk tank, and their own small pasteurizer for family use.

Both young farmers readily admit that without the Farm Youth Loan they would not be the prosperous dairymen they are today. "It enabled us to start and expand at just the right time," said Jerry. "We would never have been able to do this on our own. And we were able to learn about farm credit while we were growing."

Mrs. Lois Jump, assistant bank manager, accepted the Dipples' last check with mixed emotions. "We've gotten to know them so well and have been able to watch their progress. It's been a rewarding experience for all of us to see them grow and expand."

Both Dipples agree with Don Stewart from the bank. "It is becoming increasingly difficult for a young man to get started with a dairy of his own. It would have been virtually impossible for the Dipples without the help of the Arizona Youth Farm Loan Fund."



Dairy Bulls For Beef?

Feeding dairy bulls for beef may open
a new source of income for dairymen.

By James Nichols

Growth and Slaughter Data
On Holstein-Friesian Bulls and Steers Slaughtered
At 800 or 1,000 Pounds

AMERICANS are eating more beef than ever before, and an increasing portion of this beef is coming from dairy cattle. Dairymen seem to constantly be confronted with a tight cost-price squeeze. But they may be overlooking a potentially important source of profit—the possibility of profitably converting dairy calves into good quality beef!

The most profitable method of marketing dairy bull calves has long been under study. It is common knowledge, however, that dairy animals of the larger breeds make satisfactory gains, and many are presently being fed for beef. In fact, some feeders even report a preference for large dairy bred steers over some commercial beef cattle.

Some reasons given for the increased interest in feeding dairy animals for meat include: faster gains and more profit, consumer objection to fat and wasteful cuts of beef, availability at reasonable prices of large number of dairy bull calves and feeder steers, increased per capita consumption of beef, and larger dairy operations, making it easier to assemble large numbers of calves for feeding.

	800 Pounds		1,000 Pounds	
	Bulls	Steers	Bulls	Steers
Full live weight	815.1	814.6	1,009.7	1,007.0
Shrunk live weight	765.0	757.9	962.0	949.4
Age at slaughter (days)	303.1	337.4	391.8	419.9
Average daily gain (birth-slaughter)	2.35	2.11	2.31	2.17
Carcass weight				
Warm	453.2	452.6	575.6	580.5
Chilled	443.0	443.3	562.7	568.6
Dressing percent	57.9	58.3	58.5	59.9
Hide weight	67.6	56.6	80.6	65.8
Liver weight	11.7	10.7	11.2	12.2

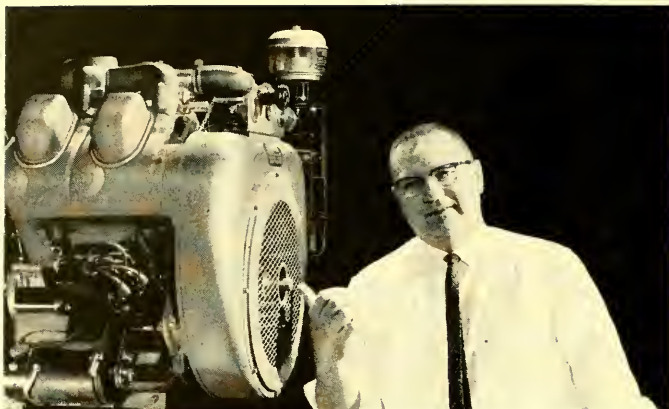
Questions confronting animal scientists are: What is the genetic relationship between milk and beef production? Do rapid and efficient feedlot gains by steers mean lowered milk production in their milking sisters? Can dairymen select sires for high-milk-producing daughters without impairment of beef production in their sons?

Long-range research is under way at The Pennsylvania State University to determine if there is a genetic relationship between milk and meat in dairy cattle. The study evaluated Holstein bulls and steers slaughtered at 800- or 1,000-pounds live weight. Newborn calves were individually fed and housed in separate pens from birth until 16 weeks of age, then group fed in dry lot until slaughtered.

The feeding program consisted of colostrum for one to three days followed by a commercial milk replacer to 42 days of age. Hay and a commercial calf starter were fed free choice to a maximum of five pounds of starter daily to 16 weeks of age. As the calves reached 16 weeks of age, they were placed into respective groups in dry lot. Here they were fed free choice hay and one pound of grain per pound of hay eaten. When the slaughter weight minus 200 pounds was reached, the animals were fed both grain and hay free choice until slaughtered.

The results from comparing Holstein bulls and Holstein steers may be summarized as follows:

1. Bulls reached slaughter weights
- (Continued on Page 34)



NEW 60.5-hp model V-461D

We talked to farmers in the Imperial and Yuma Valleys, as well as in the sun baked plains of the Southwest — and then we built the V-461D to exceed the demands of the toughest operating conditions known. Here are the results: **new** aluminum aircraft-style cylinder heads to withstand abnormally high operating temperatures **new** positive-locking anti-dieseling carburetor solenoid valve **new** intake and exhaust valve seat inserts set in head with a unique temperature-controlled, roll-lock method **new** seal-tight construction throughout. **This rugged engine de-**

livers 60.5 hp, and develops tremendous load-lugging torque at slow speeds. And all it needs for cooling is air. This combination keeps your equipment working regardless of heat, dust, load, or terrain — at lowest operating cost and with the least servicing. — Get Bulletin S-317. Write Dept. F-154.



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4-power Model B4, shown
with Tip-Off Mount, \$9.75.
6-power B6, \$12.50.
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Dairy Bulls for Beef

(Continued from Page 33)

faster than steers.

2. Bulls consumed less total feed than steers.

3. Bulls were more efficient in converting it into meat than steers.

4. Bulls had a larger percentage rib eye than steers.

5. Bulls had a larger percentage of desired cut than steers.

6. Steers had a slightly higher dressing percent than bulls.

7. Steers had an advantage in wholesale cuts expressed as percent of chilled carcass weight.

8. Steers had higher marbling and texture scores than bulls.

9. 800-pound cattle consumed 32 percent less total feed and required 87 fewer days to reach slaughter weights than 1,000-pound cattle.

10. 800-pound cattle had an advantage in percent hindquarters compared to 1,000-pound cattle.

11. 800-pound cattle had an advantage in percent desired cuts due to a greater percentage of round and chuck than 1,000-pound cattle.

12. No difference among groups was obtained in carcass conformation scores.

The beef from this experiment was retailed to University faculty and staff members. The opinions expressed by those who consumed the meat were favorable, and the consensus was that it was uniformly tasty, tender, and juicy.

The bulls were marketed at an early age before any serious problem from disposition arose. You would need to consider the age at which bulls are to be marketed, the type and condition of fences on your farm, and whether you have heifers of breeding age before you decide between bulls and steers. No serious management problems were encountered in Penn State's trial where the oldest bulls at slaughter were approximately 14 months of age.

♦♦♦



"Hah! And Pop bet me I wouldn't come home with a single fish!"

The National FUTURE FARMER



A good farm manager must first be a good fence builder

Are you a good farm manager? If you are, the chances are you're also a good fence builder. Why? *First*, because of land use. Your rough land must be grazed or managed as woodland. Both require fencing. *Second*, grazing saves labor and equipment expense—less feeding and handling. *Third*, pasture land produces more forage when grazing is

rotated. That means partition fences. *Fourth*, good fences go across slopes, where they help control erosion and save precious moisture.

GOOD MANAGEMENT also calls for Red Brand® Fences. Again you may ask why. The reason: Red Brand is Galvannealed® to fight off rust, so they cost less in the long run. Red Brand means economy. And for extra good measure, the red top strand of wire on Red Brand looks better, too. Yes, good Red Brand Fences are a sign of a good farm manager.



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Roadside Marketing

By Paul Weller

Selling your farm produce along the highway this summer may open new profit horizons if you can meet the demands of the motoring public.



THERE'S a revolution in highway marketing ahead! Improved roads, higher incomes, and more automobiles will be bringing city dwellers along country roads away from crowded streets and busy supermarkets. Chances are you can turn their country ride into profits for you through a roadside stand!

Last summer at a roadside stand in the Ohio Valley, canning tomatoes were bringing \$1.00 a bushel with more select tomatoes selling for 78 cents for a five-pound basket. Similar quality tomatoes were then bringing only 30 to 90 cents for a 10-pound basket at nearby Pittsburgh's commission houses.

Selling at the roadside can often increase your net income from farm-raised vegetables, fruit, and other farm commodities. Yet, you'll have to consider that your roadside market needs a good location, sufficient amounts of produce to sell, and longer hours on your part. In fact, you'll need to consider all factors before making a final decision.

One of the most valuable products a roadside stand has to sell is freshness, and city people know it. The tendency

is toward quality and away from wilted or stale produce, even though it is found closer to home. At Peregrine White Farms in Massachusetts, select vegetables and fruit are harvested, then displayed on tile over which cold water trickles constantly to assure freshness. On Long Island, a unique carousel is used as a roadside stand. Inside, a fine mist sprays down to keep the displays cool and moist.

And you can sell just about anything as long as it has good quality and customer appeal. In Pennsylvania, John Ziegler has over 70 beehives on his property. He collects the honey, then sells it on the honor system in his roadside stand. In South Carolina, a farmer sells white eggplant, banana squash, lemon cucumbers, and unusual varieties of tomatoes. And in Michigan, a stand operator bought some oilcloth liners and sold his empty bushel baskets as clothes baskets at a handsome profit.

Now how do we plan and build a stand? Your location is most important, for motorists must see your stand from either direction in time to stop safely. If your area is hilly, the top of a hill is usually best since traffic moves slower

there. The best locations, though, are along level stretches or on the outside of broad curves. A good rule of thumb to follow is this: If traffic moves at 30 miles per hour along your road, your stand should be visible for 80 feet; if 50 miles per hour is the speed, allow 180 feet.

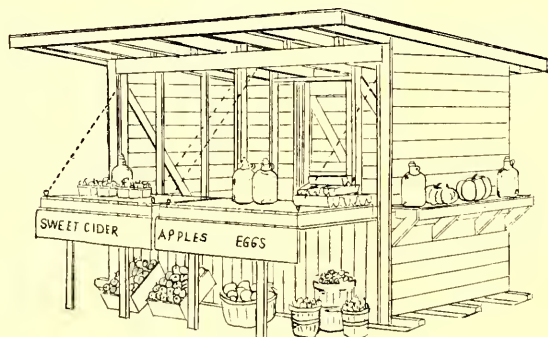
Parking area is a must for both safety and convenience. The more convenient it is to stop, the more attraction your market will have. Allow at least four times the size of your stand for a parking area, or better yet, have 15 parking spaces for every 100 cars you expect to stop in one day. A parked car in your lot is another way to lure motorists as they drive. You needn't have a paved lot; just make sure it's convenient, dry, and adequate in size.

Because you must make motorists want to stop, you'll need roadside signs that tell your story yet stand out as your special trademark. Take these for example: There's the market with a huge red wooden sign in the shape of an apple; a stand with a brightly painted old wagon loaded with colorful vegetables; a honey stand that has a glassed-in beehive where motorists can watch the bees at work; a market advertising "see it picked" while workers pick vegetables all around it; and a farmer who gives free travel literature in addition to quality farm produce.

Your signs should be at least 200 feet on each side of the stand, but the farther the better. Tests show approach signs at 1,200 feet have increased patrons 52 percent over signs at the stand itself. Make sure the signs are colorful, neat, and tell the story of your produce for sale. Novelty signs leave an impression, such as those in the shape of a fruit or vegetable. It's best to limit the wording to the name of your farm or stand, the distance to the stand, and the products for sale. At 50 miles per hour, motorists can best see letters that are at least five to six inches in height.

(Continued on Page 38)

This simple homemade roadside stand features clapboard construction, folding counters, and skids. Plans are available from many extension service offices.



ANOTHER REASON WHY AC SPARK PLUGS ARE BEST FOR FARM TRACTOR USE



AC's Self-Cleaning Hot Tip provides long-lasting power and economy

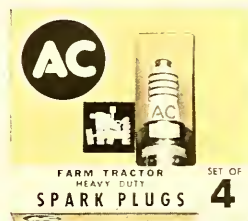
AC designed its new Farm Tractor Heavy-Duty Spark Plug with the exclusive Self-Cleaning Hot Tip to give you peak power longer. AC's Self-Cleaning Hot Tip heats faster to burn off fouling deposits—cools faster to help prevent power-robbing pre-ignition.

Compare these additional features, and see why AC Farm Tractor Heavy-Duty Spark Plugs are your best buy:

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- **KNURLED CENTER ELECTRODE** — Provides greater sparking capability to ignite combustion gases more easily—reduces possible wasted power, wasted fuel.
- **EXTRA-STRENGTH INSULATOR** — Features

Buttress-Top design to reduce flashover. It's tougher to help prevent installation breakage, withstand heaviest use.

After hours of operation your tractor needs the power and economy boost a new set of AC Spark Plugs can give. Ask for the convenient 4-Pac of AC Farm Tractor Heavy-Duty Spark Plugs wherever AC products are sold.



AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

Roadside Marketing

(Continued from Page 36)

If you're just starting out with roadside selling, you'll probably want a simple stand until business grows. Most stands are built from plywood, have the sides and front open for greatest visibility, and are on skids so that they can be moved conveniently with the tractor. Wide eaves over the front are desired to give shade for the produce on display. A lot of labor is saved each day if the stand can be closed and locked at night with the produce inside.

The stand should be neat, clean, and

most important of all, freshly painted with conservative colors. It is best located under a tree or where shade is available. Clean, neat grounds around it can be accomplished by providing space for stacking empty field crates and disposing of trimmings either in the rear or inside.

Blueprints on roadside stands from simple movable ones to elaborate year-round sheds that are used for machinery storage in winter are available from most extension services.

Once motorists have stopped at your stand, selling practices are needed to make the sale. Specialize in produce that can be raised with high quality.

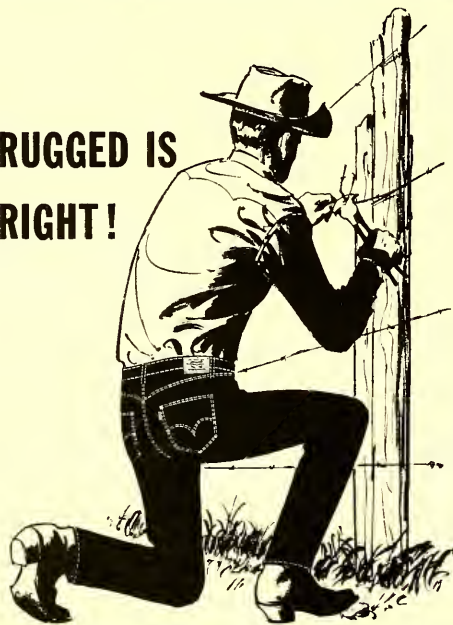
You'll need a good variety, planted to be available throughout the season. Remember these display tips: Stand bunches of asparagus in an inch of water; keep corn in covered containers with cracked ice; wash all greens and keep moist with a sprinkling can; bunch root crops, wash, and keep moist and iced. Use several sizes of containers for fruit to give customers a wide choice.

Grade your produce according to quality. Wash, trim, and discard any low-quality fruit or vegetable. Use contrasting colors in the background to show off your produce. For example, tomatoes attract more attention if they are displayed in rows on white oilcloth. Lighter produce can be arranged neatly on green cloth or oilcloth. Eye-appeal will sell for you if you are careful to consider moist, sparkling produce arranged according to size on contrasting backgrounds.

Your customers will expect slightly lower prices when they buy at the stand. A good rule-of-thumb is to keep your prices about 5 percent below city supermarkets. Specials are a good way to promote sales, you'll find. Instead of pricing items at "15 cents each," offer them for "3 for 40 cents" or "5 for 65 cents." But most important of all, make sure each item is clearly marked with a price tag. You'll find brisker sales with housewives if you add some information about the use of each product, such as its variety, its yield when prepared, and how it can be best prepared for serving.

Does a roadside stand fit your home farm situation? This is your decision, but if it does, you'll have to remember quality, neatness, and eye-appealing produce. When harvest time comes this summer, you could be collecting the middleman's profit behind the counter in your own roadside stand. ♦♦♦

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"Besides, if I raised your allowance now, it would be inflationary."

The National FUTURE FARMER



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You build enough models so every truck buyer will be able to get the

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You make changes for the better whenever they're needed. You don't hold them back till new model time.

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From the people who build the smallest truck, the largest truck and every size in between: International Harvester Co., 180 N. Michigan Ave., Chicago 1.



INTERNATIONAL TRUCKS 

"Build a truck to do a job—change it only to do it better"

MASSACHUSETTS—Twenty-eight Future Farmers from the Silver Lake Chapter gathered in the school athletic field this winter for their "100 Percent Photo." Located on Cape Cod at Kingston, only 25 miles from former President Kennedy's summer home, FFA members at Silver Lake Chapter tell their 100 percent story this way.

All members have official FFA jackets and official FFA blue shop coveralls, and each member subscribes to *The National FUTURE FARMER*. To top off their record, all members donate at least \$1 to the Massachusetts FFA Foundation each year.

As one member so aptly put it, "How about it—is your chapter a 100 percent FFA chapter?"

Every member in official FFA coveralls, Future Farmers of Silver Lake Chapter pose for group's "100 Percent Photo."



OKLAHOMA—Oklahoma Future Farmers are getting a big boost on FFA Week promotion from the Colvert Dairy at Ardmore. Dairy officials reserved one entire side of 500,000 half-gallon milk cartons for a National FFA Week message.

The plastic cartons advertising FFA Week were put on the market in late January and were circulated throughout 27 counties in south-central and southeast Oklahoma. Printed in blue ink, the message greeted milk drinkers across breakfast tables for over a month.

Most of the FFA credit goes to members of the Madill Chapter who worked with the dairy on the unique promotion. Here Dick Colvert, representative of the dairy, goes over last-minute preparations with Stan Stanley, Tom Rushing, and Advisor William Stevenson of the Madill FFA. There are few persons around Madill that haven't heard of FFA Week if they drink milk.

Dick Colvert shows side of milk carton that his dairy reserved for the FFA Week message from Oklahoma FFA'ers.



THE



NEVADA—Future Farmers from the Ruby Mountain Chapter got into the potato business this winter after harvest. Members bought 51 tons of "Nevada Grown Potatoes" from chapter president, Collins Griffith, then got two large semi-trucks to haul the load from Diamond Valley where they were stored.

With the potatoes transferred to bags and labeled, members had an informal contest to see who could sell the most to citizens of Elko and surrounding ranchers. Mike Gallagher, John Sustacha, and Dale Pappas came out on top, selling over \$1,200 worth of spuds. In the two weeks the project was carried on, over \$3,500 worth of potatoes were sold and \$1,000 profit put into the Ruby Mountain treasury.

Bags of potatoes are briefly stored in Ruby Mountain shop.



NEW YORK—One of the biggest events in all of Jefferson County, New York, or at least as far as the FFA members are concerned, is the annual soil-judging field day. This year over 200 Future Farmers dug in the plots of soil.

The event started early as members from chapters throughout the county met for the all-day program. Five large pits, each with a different type of soil, were judged according to soil characteristics, physical features, and crop potential. Each Future Farmer included his own cropping and management recommendations.

Even the local bank got into the event by donating over \$300 in cash awards and cups. With judging completed, the Jefferson County Extension Service sponsored an educational program, and Future Farmers went home with a better understanding of soil.

Future Farmers from several Jefferson County chapters begin to study a plot of soil making up part of FFA contest.



Across the U. S. A., Future Farmers Are "Learning to Do; Doing To Learn; Earning To Live; and Living To Serve."



ACTION

COLORADO—Eaton Future Farmers have their own "Little International" Livestock Show each year at the beginning of winter. The two-day event started this year as Future Farmers made the rounds of Eaton with signs to advertise their show, now the oldest and largest of its kind in Colorado.

The success of the Eaton show comes through the cooperation of local businessmen and civic organizations who contribute well over \$300 for ribbons, banners, and trophies. Sponsors display special signs advertising the show that are given to them by FFA members.

When show time is over for another year, FFA members visit each sponsor, express the chapter's appreciation, and gather up posters for use again the following year. A banner 1963 show saw over 350 beef animals, sheep, and swine

at the show pavilion, and the Eaton Chapter is making plans for an even bigger show in 1964.

Another sign in place, puts Eaton Future Farmers close to their annual goal.



A group photo shows a proud chapter and its rebuilt and FFA-colored barn.

IOWA—There's a blue and gold frame barn sporting the words "Northwood FFA" on a state highway just outside of Northwood, Iowa. Its story goes back to 1950, when the local FFA decided to buy 20 acres of land within the city limits. Then the land was swampy, covered with trees and brush, and the barn was located some distance from the highway.

Today motorists along that state highway see drained cropland, a steel corn crib, and the barn, now cut down to haymow level and sporting bright FFA colors. The idea for the blue and gold came up last fall when members wanted to advertise the FFA to motorists along the highway.

Members are proud of their unusual barn, now stored full of chapter-owned farm machinery. This winter, Advisor H. A. Rupert assembled his chapter in front of the barn for a group photograph.

INDIANA—Corn is one of Sheridan FFA Chapter's most important crops, and many questions come up each year at planting time. This past year when members were asking themselves what plant population was best and whether chemical weed control would pay, the chapter's advisory committee decided on a field laboratory.

Members gathered materials and information from several sources, then planted five plots varying from one to two acres in size. Adult farmers, as well as the vo-ag students, learned much from the demonstration.

Chapter President John Padgett summed up by saying, "Planting is no longer just putting seed in the ground. A farmer has to know the right combination of plant population, fertilizer, and up-to-date methods of weed control to get the most returns."

Advisor Noble Ross, left, pauses with Sheridan FFA members at harvest time last fall. Demonstration plots are in rear.



VIRGINIA—As part of the instruction in feeding farm animals, the Riverheads Chapter initiated a demonstration in the use and value of antibiotics with swine.

Chapter members recently purchased 10 feeder pigs, then separated them into two groups by putting the five smaller ones in a pen apart from the remaining five larger ones. The smaller pigs are fed aureomycin crumbles in addition to their standard ration, while the larger pigs receive no antibiotics.

Although it's too early to get definite results, Riverheads Future Farmers hope antibiotics will reduce the number of runts, lessen scouring, show more response with unhealthy pigs than with healthy pigs, and increase gains and feeding efficiency. In the meantime, at the chapter's pens near Staunton, members feed and compile the results.

Pen of hogs at left will receive no antibiotics, while pen on right is being fed aureomycin to test its effectiveness.



THE BULL RUN HARE CHASE



Fiction
By M. A. Hancock

PPRIVATE Purdy Singleton, Confederate States Army, sighted a fat and sassy gray rabbit on the north bank of Bull Run Creek on a sultry Wednesday evening in mid-July. He stared at it wistfully, a wry, brown-eyed tothead of 18, and the hunger to ford the creek and chase down the cottontail prickled through him as a million mosquito bites in his blood.

Back home in North Carolina, it was a born-in-the-bone fact that a hare must be immediately and vigorously pursued whenever and wherever he was spied, but here and now—near Manassas, Virginia, only 25 miles southwest of the Union capitol at Washington—there could be Yankees with guns somewhere in the woods and fields on the rabbit's side of the creek. They'd be newly uninformed troops that were as green and untested at soldiering as Purdy's own Confederate regiment. And Purdy's regiment, fresh off the farm and with nothing more martial than a few weeks of training camp under their brass-buckled belts, had been marched up to man their share of the Confederate defensive line that very afternoon.

And if the rumors were even half true, the shooting war between the North and the South would begin in earnest along this front within the next few days. There'd been a few minor clashes, of course, since the firing on Fort Sumter had started things three months before, but both sides had been too busy mobilizing to fight any big battles so far.

The Yankees were on the move now, though, hoping to march all the way into the Confederate capitol at Richmond, and the Southern troops were converging to stop them here if they could. Purdy's regiment, one of the first to reach the bank of Bull Run, had just stacked arms within the hour and eaten supper; and Purdy, after balefully wolfing down the issued rations, salt pork and hard crackers, had walked

Purdy's regiment, one of the first to reach the bank of Bull Run, had just stacked arms within the hour and eaten supper.

upstream in search of some blackberries to help relieve the deep feeling of goneness in his stomach.

He'd found no blackberries, but the rabbit, leisurely shuffling through a clump of clover on the north bank of the creek, could have been stewed into a stomach-comforter of considerable proportions if he were doing his shuffling on this bank of the run. For Purdy's captain had said that no member of Company D was to cross the creek under any circumstances short of his direct orders, and Purdy's captain was a man quick to anger and slow to calm.

"Blast you, old hare," Purdy growled. "You're a Virginia-born bunny, and if you weren't an out-and-out traitor to the Cause, you'd be over here on this side of the creek doing commissary duty for the Confederate States Army."

He sighed, turned, and moved back to the small clearing where the rest of Company D sat glumly pawing their knapsacks for crumbs.

"Spied a big gray rabbit back yonder," Purdy said, jerking his thumb over his shoulder. "Stewing size. Prime stewing size."

"Where?" shouted Company D in unison, most of whom were home county kin or friends of Purdy's and bone-and-blood hare chasers to the man.

"Well, he's more or less on the other side of the creek," Purdy admitted, "but I'm of half a mind to splash across and chase him down for our pot anyhow."

The lieutenant, a young school teacher from Purdy's home county, leaped to his feet and scowled fiercely. "You heard what the captain said about any of us crossing the creek," he said importantly. "Far as we know, you could run into the whole Yankee army over there."

(Continued on Page 44)

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If you're good enough to get in...a proud future can be yours in the new action

Army

BULL RUN HARE CHASE

(Continued from Page 42)

Purdy snorted. "The captain isn't suffering from the severe stomach empties like we are; he's eating his fill at the regimental commander's tent right now, roast chicken and corn bread by the way it smells on the breeze. And besides, we've got sentries and cavalry pickets patrolling the woods on the other side of the creek, haven't we? If there were any Yankees within five miles of here, we'd have heard about it by now."

"Maybe so," the lieutenant said. "But if you disobey the captain's orders, he'll eat you alive when he finds out."

"No need for him to find out," Purdy said, moving to the edge of the clearing and staring thoughtfully at the rabbit, still placidly eating clover on the opposite bank. "The creek runs shallow a few yards downstream from where the old hare is, and there's a good chance that a few of us could sneak over there and drive him over to this side. Then we could run him down without disobeying the captain's orders much more than 90 percent or so."

"Well," the lieutenant said, staring hungrily at the shining, empty tin plate, "it would go worse on us if we tried to shoot the rabbit for our pot because the captain promised to court-martial the lot of us if we gave away our position by a single shot of random firing. So with a few mouthfuls of rabbit stew to forget on, maybe I wouldn't mention it to the captain if you can drive the hare over here before he gets back. But you'd better take your guns with you just in case you do run into something on the other bank besides rabbits."

The men of Company D grinned broadly, nodded vigorously, and voted unanimously to place Purdy in command of the expedition. Purdy, quickly selecting a 20-man squad of expert hare chasers, led them cautiously across the creek downstream from the hare, deployed them in a wide half circle, and gave them the signal to close in slowly. Suddenly the man nearest to the creek bank tripped over a honeysuckle vine and crashed noisily to the ground. The hare bolted out of the clover in one mighty bound, leaped over the fallen hare driver, and cut due north into Yankee country.

Purdy froze for a splinter of a second, the image of his captain's wrathful face blazing across his mind's eye; then the fever in his blood boiled down through his legs and sent them pumping after the running rabbit. Overcome by the same compulsion, his hare-driving squad pounded vigorously at his heels. Purdy sprinted joyously through the

woods, closing the distance on the panicked, wildly zagging hare. Suddenly the rabbit darted up a small rise and scooted into a hollow log. Purdy whooped triumphantly and made a dive for the log, covering the opening with a mossy flat rock. Behind him he heard the vanguard of the Company D hare chasers bump to a halt and collectively draw their breaths. Purdy looked up, and his eyes went wide and his jaw went slack.

The far end of the log was sealed by a heap of haversacks, and sitting bolt upright beyond the log were 20-odd gape-mouthed soldiers with guns across their knees. Their uniforms were gray, but brass-lettered on their caps was "1st Mass."

The Carolina Confederates and the Massachusetts Yankees stared at one another in frozen silence, but not a gun was raised.

"Are yo'll Yankees?" Purdy gulped finally.

A lean, snub-nosed soldier on the teen side of his twenties rose to his feet and nodded his flame-red head. "I'm Corporal Enoch Diddlefield, and I come from a farm just north of Boston," he stammered. "Are you what rebels look like?"

"Defenders of the Confederacy is what we are, not rebels," Purdy said indignantly.

Silence settled heavily again, both sides contemplating each other in nervous indecision.

"Are yo'll a part of the Yankee battle line?" Purdy asked finally.

"Not exactly," Enoch Diddlefield sighed. "When we were on the march this morning, we spied a flock of enemy geese in the woods alongside the road. We broke ranks and gave chase, and

somehow mislaid our regiment. All day long we've been trying to find our way back, but all we've done is walk ourselves deeper into the woods and deeper lost."

"Did you catch any geese?" Purdy asked hopefully. "Might you have a few bites left over?"

"Couldn't catch so much as a feather," Enoch Diddlefield said mournfully. "We ate the last of our rations a little after dawn this morning, and not a one of us has had a morsel of food since then."

"Well," sighed Purdy, thoughtfully rubbing the back of his neck, "I'll admit that I'm fresh-hatched at the soldiering business, but it seems to me that one squad of us is bound to be the other squad's prisoners or something."

"Thinking the same way," nodded Enoch Diddlefield. "And it just crossed my mind, too, that our colonel might be a lot easier on us if we rejoin our regiment with prisoners in tow. So since we were here first and successfully held our ground, it makes it right and fair that you Reds surrender to us."

"You Yanks don't know beans about the rules of war," Purdy exploded. "And for captain-soothing purposes, we need some prisoners every bit as bad as you do. The way it really happened was that we charged and took your position, so yo'll are duty-bound to surrender to us."

"Never!" shouted Enoch Diddlefield, jutting out his jaw. "There's not a drop of surrender blood in our entire regiment."

"Our regiment," Purdy said fiercely. "doesn't even know the meaning of the word 'surrender.' Truth to tell, the page it's on has been ripped out of every last dictionary in the South."

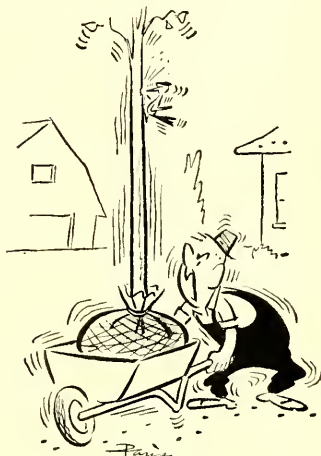
Suddenly, without command or signal, Purdy and his fellow Carolinians swung up their guns and trained them on Yankee jacket buttons. At the same moment, with the same motion, Enoch Diddlefield and the men of Massachusetts raised their rifles and sighted them heart-high on the Carolinians. They stood frozen, Union and Confederate, gun hammers clicked back, fingers curling on triggers, and all reading the same message in the eyes of the others—that not a man of them was yet willing or able to send his first Minie ball tearing into human flesh.

In the throbbing silence, Purdy heard the rabbit make a scratching sound inside the hollow log. He brightened suddenly and slowly lowered his musket.

"Maybe we could settle our prisoner problem by a more peaceable means," he said. "Are there any uncommonly fleet-footed men among you Yanks, Diddlefield?"

"Well, there's me," Enoch said, easing

(Continued on Page 54)



"All right—can't you wait?"

OFFICIAL FFA CALENDARS FOR 1965

Here's a project that should be in every Chapter's Program of Work under Public Relations.



This is a project the chapter can be proud of . . . Not a hand-out request for donations or a door-to-door selling job—but instead, it is an effective advertising opportunity for business firm sponsors. 1965 FFA Calendars cost no more than commercial calendars, but they are worth a whole lot more.

Project Kits are not sent to chapters unless requested by a chapter officer or your Advisor. Bring it up at your next meeting and volunteer to serve on a committee to get your chapter participating in the National Calendar Program.

WHO CAN USE OFFICIAL FFA CALENDARS?

PLAN A—Business firms can advertise their products and services on FFA Calendars through a sponsorship arrangement with the FFA.

PLAN B—FFA Chapters and State Associations may order and give away or hang FFA calendars as a public relations activity.

PLAN C—FFA calendars may be ordered in any quantity or singly from a special group of preprinted calendars. Anyone may order.

The National
Future Farmer
Owned and Published by the Future Farmers of America
Alexandria, Va. 22306

PHOTO Roundup



Nebraska FFA chapters are recognizing State Farmers as part of their program of work. At Fullerton, names appear in a special area over the bulletin board.



Texas FFA president, Benny Mays, receives keys to a new car from Executive Secretary Clemon Montgomery. The car will take Benny over 55,000 miles to some 520 chapter visits. Texas plans to provide a car for state presidents' FFA travel on a yearly basis.



Farm Bureau President Charles Shuman, right, welcomes guests to their 1963 Convention in Chicago. From left are Elmo Cook, County Agents; Joe Erickson, 4-H; and Nels Ackerson, FFA president, who addressed the farm group.

When Bill Kent sold his sheep because they annoyed his neighbors at Redding, California, he became assistant to a veterinarian for practical experience.

Money for vo-ag shop supplies inspired Silas, Alabama, FFA members to open a store in the local high school. Selling cookies, soft drinks, and potato chips during two 10-minute periods a day, Future Farmers have counted \$100 a month profit for tools.





GM project engineer and honor student Ronald Marker watch "Bump and Shake Rig" gather vibration data.

Shake well before using

Will this car's shock absorbers maintain control on a gravel road? What effect will vibrations have on stress points at 70 mph? Where is the ideal spot for a rear axle to be mounted when the car hits a pothole?

General Motors puts its cars through the paces—on Proving Ground test tracks and roads around the country—to find out.

In addition, the "Bump and Shake Rig" at our Technical Center is constantly called upon to answer these questions, and hundreds more, for GM engineers. It simulates rough, bumpy, unkept roads you might encounter anywhere—in the laboratory, where instruments can record the effects on the spot and replay them time and again. Sometimes these tests are conducted up to five years before the first customer takes a demonstration ride.

To begin a test, the project engineer chooses a road

speed and road condition, which he can dial into the roller drums under the wheels. Then he attaches magnetic "stethoscopes" to various positions under the car. These lead to a 14-channel tape recorder where the degree of vibration at each point is recorded, then automatically drawn on a graph for thorough study.

This is only one of many tests a GM product must undergo before it's produced—and another example of how...

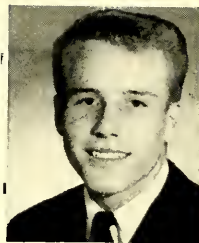
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Ronald Eugene Marker, senior, Jefferson Local High School Farmersville, Ohio, recently visited GM Tech Center with a group of fellow National Honor Society members. A top student with an intense interest in science, Ronald has been accepted by the General Motors Institute where he plans to major in electrical engineering.

Paul Lost Before Winning



**Determination to succeed
despite repeated losses
with his turkeys has
brought Paul Kelson
national recognition.**

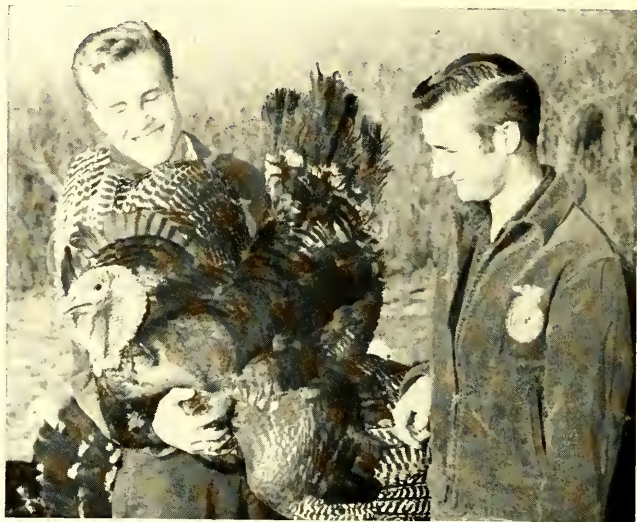
FOR AS long as Paul Kelson can remember, his family has raised poultry on their farm near Moroni, Utah. This past year, Paul raised nearly 8,000 turkeys himself and was awarded the National Turkey Federation's Youth Achievement Award for 1963.

Those close to Paul Kelson know of the sheer determination he has displayed despite setback after setback with his turkeys. He kept going when others would have given up this poultry enterprise as a poor risk. But most important of all, as his national award shows, he is making a success from a failure.

His first reversal came in the spring of 1958, when the family flock of 10,000 turkeys contracted sinusitis. The two-week-old poults began to die by the score. "We'd have been ahead if we had killed them in the coops, but we had hopes they would get over the disease," Paul told us.

But they didn't get over the disease. He spent the entire summer doctoring turkeys with his dad. "We would start at sunup and work with them until it got hot, then haul their feed, and jump back to doctoring them at five in the afternoon." It wasn't a very pleasant way to spend a summer vacation, and Paul almost lost faith in turkeys.

The following spring his dad's reassuring, "The best place to find the money we lost is where we lost it," put them back into raising turkeys again. But the disease problems weren't any better. As Paul explained, "Even the wild pheasants in the field had the disease." Needless to say, the costs of medicine and low dressing weights of the surviving birds brought in another loss.



A prize turkey ready to market takes the attention of Paul, left, and a fellow Moroni Chapter member. His 1963 toms averaged 29.6 pounds dressed.

Enrollment in vo-ag in the fall of 1959 began to bring better luck to Paul and his turkey enterprise. He started with 75 turkeys of his own and raised 25 for his sister. At the close of the year, he raised 70 of the 75 turkeys that were his, figuring a 6.6 percent mortality rate. All of the hens and 94 percent of the toms graded A Grade. Feed consumption was still too high, but when all was figured, Paul had come out \$69 ahead—his first profit from turkeys.

The following year Paul and his father went into a written agreement on 8,000 turkey hens. It became the Future Farmer's responsibility to manage the birds from start to market. His return would be one-fourth of the total profits. Paul now had complete charge of the entire turkey operation.

Disease again was a factor, but Paul's management kept it to a minimum. At the close of the year he killed 7,568 of the original 8,000 birds for a reduced mortality rate of 5.4 percent. Feed consumed was 514,451 pounds to produce 98,714 pounds of turkey, making

a conversion of 5.21 pounds per pound of turkey. Again, Paul netted a profit.

At the same time he was managing the 8,000 birds, the Future Farmer was raising 50 show turkeys in a small coop. At killing time he had all birds—100 percent livability with the hens averaging 97 percent A Grade. He made a net profit of \$113 on this group, not counting the first place hen that brought an additional \$150 at the Utah Turkey Show. He was now in business!

The agreement with the 8,000 birds has continued between Paul and his father. At last count he had reduced the feed consumption ratio to 4.37 pounds of feed for each pound of bird. Where once turkeys were costing money and headaches, they are helping put Paul through Utah State University.

"The importance of good management, planning ahead, and keeping accurate records has helped me succeed," Paul readily tells us. "But most important, my turkeys have taught me to work—an attribute I will need as long as I live."





Indiana Corn Grower Uses Armour Fertilizers To Win County Championship With 194.2 Bushels Per Acre

Meet James Duling, 1963 Owen County, Indiana, 5-Acre Corn Growing Champion . . . and a Vertagreen user. Mr. Duling, who farms 500 acres near Spencer, Indiana, took top honors with an average yield of 194.2 bushels per acre on a five acre tract. The contest was sponsored by the Indiana Crop Improvement Association.

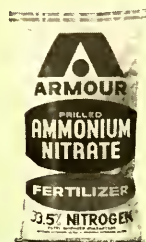
In growing his way to the championship, Mr. Duling fertilized his corn with Armour Vertagreen 6-24-24 as a starter. Then, he side-dressed with Armour Ammonium Nitrate. The result was his prize-winning 194.2 bushels per acre yield.

James Duling has been using Vertagreen for several years and he is obviously pleased with his choice of fer-

tilizer. Says Mr. Duling, "In side by side tests Vertagreen has produced crops that out-yielded all crops fertilized with other premium brands I have tried."

What about your land? Is it giving you championship crops? If not, follow Mr. Duling's example and fertilize with top-grade Armour products. Remember, Armour Vertagreen is "Worth More Because It Does More."

"Worth More
Because It
Does More!"



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History of the Breed

The Poland China

THE POLAND China hog we know today developed in the Miami River Valley of Ohio, over 155 years ago. This fertile valley area north of Cincinnati gave the western-bound settlers their first view of the American Corn Belt—rich lands adapted by nature to the growing of corn and hogs. The abundant corn supplies grown here changed hog raising from foraging in the woods to a means of marketing surplus feed grains.

This new crop area demanded a new type of hog than could be found in the early 1800's. Needed was a hog of greater size and vitality that could travel on foot to the markets at Baltimore and Philadelphia, some 500 miles to the east.

Over a period of 25 years, breeding stock was brought into the Miami Valley and bred with the foundation stock molded there by the Shaker Society, a communal group of farm folk. Among the imported stock were three large white sows and a large white boar purchased in Philadelphia, and said to be of Chinese stock. Still other stock included hogs from the Duke of Bedfordshire, early Berkshires, and Byfield hogs.

Out of this blending came a hog of great size, heavy bones, and thick fleshing, with the drooping ears preferred by drovers of that day. It was believed drooping-eared hogs bunched better for the long drive to market, for those that strayed quickly became lost along the wooded trails. Toll gate records attest to over a million hogs per year being driven eastward by 1850.

The Miami Valley hog gained great fame as pioneers moved westward, and no caravan was complete without a drove of the hearty swine. By 1873, they had gained world-wide fame and an official name was needed. At a national swine growers convention in Indianapolis that year, the name Poland China was selected. Poland for an obscure farmer named Asher-Asher (said to be Polish by birth), who had raised a boar of great fame; and China for the white hogs from Philadelphia, which were obviously not Chinese since Chinese hogs were small and early maturing.

As the popularity of the new Poland China breed mounted throughout the 1870's, the need to maintain the purity of the strain with pedigrees was brought about. The breed reached its peak of popularity in 1919, when over 200,000 head were registered.

Today, Poland Chinas are one of the most numerous breeds in the U. S., recording 28,478 animals in 1962. It is widely known as the "heavy muscled breed," this being reflected in the fact that for 16 years the Poland China has yielded the highest percentage of trimmed ham of any breed or cross at the National Barrow Show. A Poland China set the world's record last year at the Minnesota Spring Barrow Show for loin-eye muscle when one measured 8.56 square inches at the tenth rib.

As the need for meat type hogs continues to grow, Poland Chinas continue to increase in popularity.





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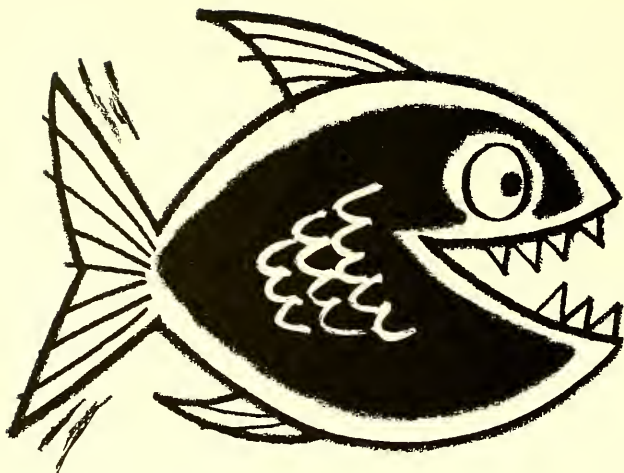
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OLIVER





TROUT Go For WORMS

By
P. C. Phillips

TROUT go for worms! We who angle for trout with worms are referred to as "night crawler dunkers" by the elite fly casters. But, a trout caught with a worm tastes the same as one caught on a fly. It takes as much skill to catch trout with worms as by fly-fishing.

I use a No. 5 or 6 "Eagle Claw" hook with a six-inch leader attached. I tie it to a 10-pound gut leader about 20-feet long, then tie this to my regular flyline. I usually use a nine-foot flyrod, but if I am going to fish a stream where willows and brush make it hard to fish, I use a six-foot spinning rod and reel with a 10-pound spinning line. The reason for the 10-pound line is that with a stronger line I am able to retrieve more snagged hooks.

I use three medium-sized split shot sinkers, two to three feet from the hook. I squeeze them on just tight enough so they stay in place. Then if I only wish to use one or two, I slide the other up the leader to where I have spliced it to the line, and they will not interfere with getting bait where I want it. Sinker weight depends on strength of current and on whether you want bait to lie on the bottom or float suspended in current.

The sinker weight, speed and direction of current, depth of water, distance to spot you want to fish, and how you want to fish the particular place must all be taken into consideration. Run the

hook twice through the night crawler at one end leaving the point of the hook covered. About three-quarters of the worm is then free to wiggle and attract fish.

Always fish the stream so that your shadow falls behind you or at least upstream from the spot you intend to fish. If I am fishing up a stream, I always circle back from the bank to get above the place I want to fish, then let my bait float downstream. Your shadow will scare trout as much as the sight of you.

Be alert for trout breaking water. I have often caught one by fishing a spot where I have seen or heard one breaking water. When they do this, they are feeding and in the mood to bite. Tread softly and keep out of sight. Each hole, grass overhang, or cut under bank must be fished differently, depending on speed and direction of current, depth of water, and distance to spot where you wish to get the bait. Always float bait to spot.

When the bait is where you want it, either on bottom or floating underwater, let it stay there five or 10 minutes. If by then a trout hasn't taken it, twitch the end of your rod two or three times. Sometimes this will cause a trout to strike. Do this five or six times waiting about 20 to 30 seconds between times.

If by this time nothing has happened, you may as well try another spot. But do not be so afraid of getting your hook

snagged that you do not let the bait go under brush. If the spot looks good, fish it. If you hook a trout, you can usually get him out. If you get snagged, you have only lost a hook. I usually lose six or eight in a half day of fishing.

When you get a strike, the problem is when to set the hook. I have had trout bite almost like a sucker, especially the larger ones. At other times they will smash at a bait and run with it. Then it is no problem. You snag them when they start their run. But if they are lazy about it and jerk the line a few times, stop for a while, then jerk some more, you have to use your judgment. I usually let them fool around awhile and then try to snag them when they are jerking the line. But I have lost many trout by trying to hook them too quickly.

One will usually get more and bigger trout in smaller streams worm fishing than by fly-fishing. You can get down to where the big ones are hiding. They will take a worm even though they are not too hungry if you get it close to them in such a way that it appears to be a worm washed from the bank and lying on the bottom or floating with the current.

But it really makes no difference how you fish. As long as you are on that trout stream, "God is in His Heaven, and all is right with the world."





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Note: There are six demonstrations per kit.

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BULL RUN HARE CHASE

(Continued from Page 44)

his rifle from his shoulder. "Back home, I've won the Fourth of July County Foot Racing Championship for three straight years."

"How are you at running down rabbits afoot?" asked Purdy.

"Can't say that I ever tried," Enoch said, his eyes lighting with interest. "But if it can be done, a Massachusetts man can do it better than anybody else."

"What say we flush that old hare out of the hollow log, then, and you and I

give chase?" Purdy said. "If one of us catches a rabbit stew for his own men, he's caught himself a squad of prisoners, too."

Enoch gazed thoughtfully at the log. "You Rebs will surrender peacefully if I run the rabbit down? You'll hand over your guns, tell us how to get back to the turnpike, and let us march you in without giving us any trouble at all?"

Purdy and his fellow Carolinians solemnly nodded. "And if I catch the hare, do you Yanks swear you'll turn over your rifles to us without firing a shot?"

Enoch and the men of Massachusetts raised their hands in sober pledge, and

with 40-odd deep-chested sighs of relief, both squads stacked their guns and formed a wide circle around the log. Purdy and Enoch shrugged out of their uniform jackets and toed a mark. A Massachusetts man carefully removed the pile of haversacks that sealed up the northern end of the log while a Carolinian poked a long stick through the southern opening.

The hare bounded out of the log in a white-tailed blur, and Purdy and Enoch broke neck and neck from the starting line. Enoch pulled into the lead, turning sharply to follow the frantic zigzags of the hare as it tried unsuccessfully to break out of the encirclement of men. Up and down and around and around Enoch sped after the cottontail. Purdy lagged ever farther behind, finally stopped altogether, and jogged, grinning, back to the hollow log.

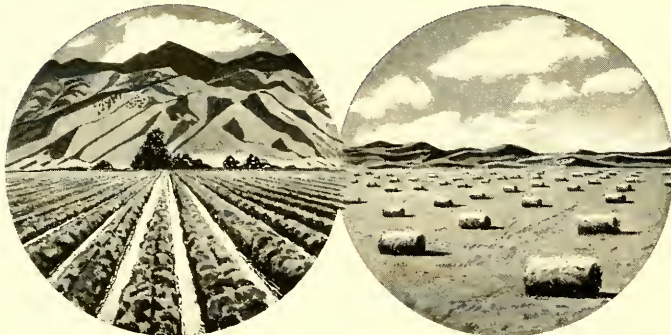
Suddenly the hare took a wide turn and headed straight for Enoch. Enoch froze and lunged desperately for the rabbit. He skidded headfirst and spit dirt across the ground, collecting nothing but three rabbit hairs and a squeak for his trouble.

With all other avenues of escape cut off, the hare—as Purdy had known it would do out of rabbit-chasing wisdom learned at his grandfather's knee—began to maneuver back toward its last-used safe hiding place, the hollow log. Purdy crouched tensely over the south opening of the log, watching the rabbit make another wide turn, then bound in his direction. Out of the corner of his eye, he saw Enoch Diddlefield roll quickly to his feet and speed to the chase again.

Purdy riveted his attention on the

(Continued on Page 59)

LOOKING FOR FARMING OPPORTUNITIES?



High and low they are in the Union Pacific West

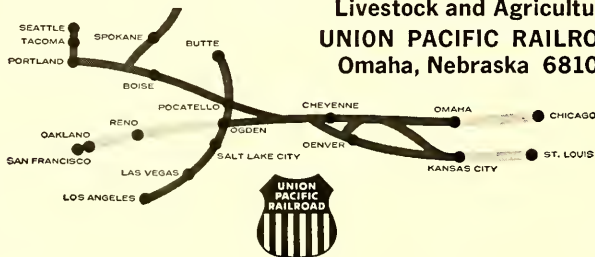
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THIS TOO WILL PASS

In these days of milking parlors and automation, few FFA members receive the personal contact with cows as did Author Phil Kunz. His experience is a humorous look into a bygone era.—Ed.

MY THOUGHTS were on assorted subjects that night as I sat on my old one-legged stool and began to milk the cows. I pushed my bare head against the cow's flank, and a soft tune flowed from my lips. When I first started, I milked quickly and made several inches of foam, but then I got tired and slowed down. The milk went into the bucket making a sleepy noise.

Suddenly my thoughts turned to my girl and our anticipated date, and I gave a sudden jerk and began to milk quickly again. Apparently, it awoke the cow and she, not used to the sudden speed, kicked out with her hind foot. When it came back, it landed on my toe. I tried to push her off, but she just placed more weight on it, bringing terrible thoughts into my mind. I hated that cow!

With my foot under the cow and the milk bucket in one hand, I picked up the stool in the other and made some drastic threats. Seemingly, she didn't like that because she kicked again, releasing my hurt toe but catching the bucket with her foot and bringing it to rest on the ground, half of the milk spilled, and her foot in the midst of the rest of it. Well, I pushed, I pulled, I cried; but she wouldn't move off the bucket. In a fit of rage, I grabbed a long stick and started to run toward her with the stick pointed at her heels; however, just as I got there, she kicked again, pushing the other end of the stick into my stomach, which knocked the wind out of me.

Following a few unchosen words and a bit of pain, I picked up the bucket only to find that it was dirty and needed to be washed. Despite the fact that I had to pick up my date in just an hour and a half and had seven cows to milk, I walked about a quarter of a mile to wash the bucket. On the way back from the water, I watched the cows, driven by heel flies, jump through the fence and run across the field into a briar patch. The dog wouldn't come out from beneath the shed; consequently, I walked after the cows and got them back into the corral myself.

As soon as I sat down to milk, I discovered that my cow had a lot of briars in her tail; and when she tried to scare the horseflies off her back, that tail full of briars caught me on the side of the head. After once or twice I couldn't stand it any longer, so I tied an extra stool to her tail. I hadn't milked a cupful when I felt everything go black—that cow had lifted the stool into the air and it fell on my head.

Well, after a while I started to milk again, and then the cow started to walk. Perhaps she forgot that I had tied her tail to the fence to keep it from flipping me with the briars. Only two or three inches of the hair on the end of her tail broke off, however. Even so, it was enough to give me an idea: Why not cut all the hair off the tail and thus remove all of the briars? I did! First it was that soft tail full of briars, but then it was a stubby hard thing that felt like a piece of iron when she hit the side of my head.

My father milked the cow the next morning. His head, too, must have been softer than the cow's tail because he later took me into the woodshed and used his belt on a particular part of my anatomy. I really couldn't see why—after all, I had left only part of the cows unmilked. Then, too, that large bruise on the side of his head might have been put there some other way if the cow hadn't done it. Oh well, this too will pass.



"I see where three adults were arrested for speeding. Wonder what this age is coming to?"



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THESE booklets are free! You can get a single copy of any or all of them by mailing the coupon below. Just circle the booklets you want and send us your complete address.

41—You and Your Bank—Young farmers establishing credit for farming need to know the facts in this colorfully illustrated booklet. Its 34 pages explain the services offered by banks, how to borrow money, where to get farm credit, and how to plan for repayment. (American Bankers Association)

42—Operation and Care of Your Milking Machine—A complete handbook with 20 pages on good milking machine practices, cleaning the milker, and how to fight mastitis. Dairy authorities cover areas such as detergents to use and how to prevent profit-robbing mastitis. (Crown Dairy Supply)

43—Firestone Farms and Test Center—Here is the fascinating story of how a major farm tire manufacturer operates its own farm with cattle, crops, and test plots. Within the farm are 100 acres set aside to test farm tires for every kind of expected abuse. Learn what tires undergo. (Firestone Tire & Rubber Company)

44—Hot Tips for Outdoor Cooks—This handy-size outdoor cooking booklet is filled with ideas about building outdoor fires, making low-cost fireplaces, and how to cook complete outdoor meals. If you camp out, you'll want this 36-page guide. (Joseph D. Bates, Jr.)

45—Tilt-Up Concrete for Agriculture—Designed for farmers, this 12-page booklet goes into illustrated detail on the advantages and uses of tilt-up concrete. You'll find projects to build, how to prepare a site, mixes to use, and how to cast and finish wall panels. Build garages, livestock pens, and hog pen partitions. (Portland Cement Association)

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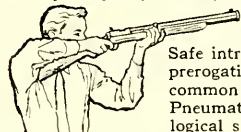
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Watering pots of Easter lilies in the chapter greenhouse kept FFA members busy.

Easter Lilies From Parkside

THE EASTER season is coming in with a flurry of white blooms for vo-ag students at Michigan's Parkside High School. You'll find their new 60-by 18-foot greenhouse adjoining the vo-ag classroom bristling with nearly 150 blooming Easter lilies, placed there by students eager to learn floriculture from management to marketing.

When plans for the new Parkside High's vo-ag department included a modern greenhouse, Advisor Warren Parsons began developing a program in greenhouse and floriculture work. From his planning came this year's Easter lily project to be used as both a teaching and community service activity.

At the beginning of the school year, Advisor Parsons ordered 150 "Ace and King" Easter lilies from a grower in Oregon. As the lily bulbs arrived at Parkside, vo-ag students pitched in during class to pot each bulb in a soil mixture of one part soil, two parts peat, and one part sand. As a final touch they added approximately three



Periodic repotting of lilies gave Future Farmers good greenhouse experience.

teaspoons of Dexon Terrachlor per cubic foot of soil mixture for fertilization.

Because of subfreezing weather outside, the potted lily bulbs were taken to the greenhouse where temperatures could be controlled. By this time it was well into November. For a month the bulbs developed roots, then began sprouting around Christmas. By January 1, the Parkside lilies had grown about three inches.

Vo-ag students studied the progress of the lilies as they watered them and controlled the environment in the greenhouse. Repotting the growing plants and cleaning the soil and equipment became part of their vo-ag floricultural training. They took close notice as the young plants grew and began developing floral buds nearly two months before Easter.

During the week before Easter, lilies in partial bloom will be sold or given as gifts to faculty members, parents, and the people of Jackson, Michigan. For over five months Parkside High's vo-ag students learned and studied greenhouse floriculture with lilies. At Easter, their friends and relatives will share the flowery benefits.



"If you're looking for the egg-money check, it came—and went."

BULL RUN HARE CHASE

(Continued from Page 54)

oncoming hare, gauged its pace carefully, and sprang for it as it cut toward the hole in the log. Triumphant he felt his hands close over the hare's front feet. At the same instant he glimpsed something round and red hurtling toward him; then his head seemed to explode with lightning and everything went briefly black.

Dazedly Purdy shook the fog from his brain and sat up. Beside him, Enoch Diddlefield rose slowly to one knee, gingerly fingering a swelling knot on his forehead. The rabbit was nowhere to be seen.

"Where's the old hare?" Purdy asked, as the circle of soldiers converged disconsolately on the log.

"Got his second wind and broke through our line after you and Diddlefield cracked heads," a Carolinian reported mournfully. "After he was clear, he kept cutting north then south like he couldn't make up his mind whether he was going to wait out the war in Canada or Mexico, but it was going to be one of those places for sure."

"Well, I had him good and tight by the legs before he got away," Purdy said. "I claim I caught him, by jasper, and that makes the Yanks our prisoners."

Another Carolinian shook his head firmly. "Diddlefield's dive caught the hare by the back legs just as you closed your fingers over his front legs. The way I see it, the only fair thing to call it is a drawn battle. Nobody is anybody's prisoners: we'll tell the Yanks how to get back to the turnpike, and both squads of us will rejoin our regiments a good bit hungrier than we were when we left them."



"You can have the car tonight, Dad. I've got to bone up for some exams."

April-May, 1964

The Carolina Confederates and the Massachusetts Yankees nodded in solemn agreement, shouldered their guns, and trooped wearily back to face the fiery-eyed wrath and identical punishments meted out by their respective commanders, bread and water rations for a week . . .

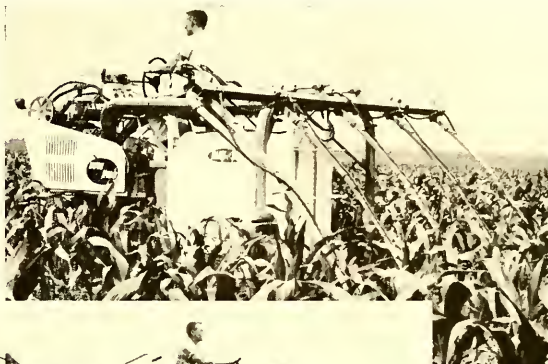
The Battle of Bull Run was fought two days later, but it wasn't until the Confederate surrender at Appomattox that Purdy Singleton and Enoch Diddlefield met again, shared Enoch's hard-tack, and exchanged glowing descriptions of their most prideful war years' cottontail catches. For it is a matter

of history that the men of the Confederate Army of northern Virginia gave chase to every hare they sighted from Bull Run to Appomattox. It was a call to the Southern blood somehow, an uncontrollable compulsion that was pursued to the wild-whooping delight of the troops and to the helpless despair of their commanders.

As for the ever-spreading rash of Yankee hare chasing that broke out in the Union Army of the Potomac, it moved abreast of the whereabouts of Corporal Enoch Diddlefield's company of the 1st Massachusetts.



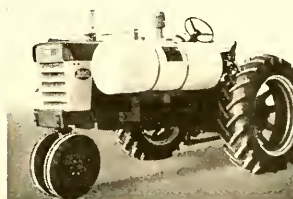
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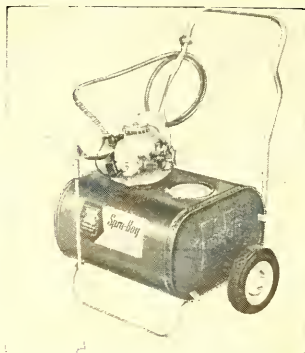
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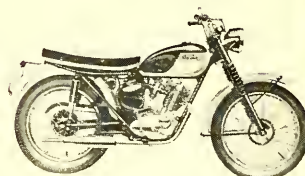
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N. Portable "Spra-Boy" has 10-gallon tank, two-cycle gas engine, 84-inch hose. Comes with cart, sells for under \$100. (Hudson)

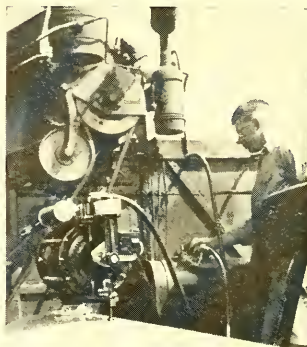


P. Hottest engine in class features "Tiger Cub" lightweight cycle. Racing cam, one-cylinder engine with alternator. (Triumph)

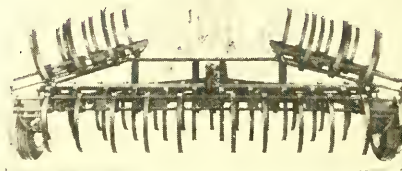
R. Spring-tooth harrow has hydraulic-operated wheels, folding wings, up to 20-foot widths. Is easily raised 10 inches to dump trash, clear obstacles. Spring-steel teeth. (Brillion)



O. Compact pickup with 90-inch wheelbase, 213-cubic-foot capacity, 101- and 140-hp engines. Easy to drive and park. (Dodge)



Q. Gasoline pump operates from intake manifold of pickup. Refuel machinery in field from tank in your truck. (Tokheim)



S. Gandy applicators now have "Ro-Wheel" to crush lumps, level and firm soil. Gives precise planter control. (International)



Free detailed information is available on the above products. Send coupon to National Future Farmer, Alexandria, Virginia 22306.

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Sportrait

by
Stan Allen

JERRY WEST, backcourt ace of the Los Angeles Lakers, is one of the top guards in professional basketball after only three years in the pro ranks. He and Elgin Baylor team up to form the greatest scoring punch in today's game.

Jerry started his basketball career with a basket nailed on a garage back in West Virginia. He became a star on the East Bank High School team and paced them to a state championship. Then on to the University of West Virginia where he became an All-American. He led West Virginia to a conference title in 1960 and was the Most Valuable Player in the NCAA tournament that year. After college he co-captained the U. S. Olympic basketball team.

Jerry joined the Lakers for the 1960-61 season and got off to a good start, scoring 1,389 points for the season. It was good for sixteenth place in league scoring. Most important of all, he was going to be the spark plug needed to hold the team together. The Lakers finished second in the league that season and almost won the play-offs, losing in the final 11 seconds of the seventh game.

The star is 25 years old, stands 6 feet 3 inches tall and weighs 175 pounds. He is not considered big in professional basketball but is an excellent ball handler with good speed. His one-handed jump shot from 17 feet away is deadly, and the pros consider him one of the finest defense men in the game today. He can outjump players that are four inches taller. His handicap, being prone to injuries, has followed from his collegiate days. His nose has already been broken four times playing basketball.

In 1960, during a game with West Virginia playing Kentucky, Jerry broke his nose in the first half. He came back in the second half to score 19 points for a game total of 36 points. Jerry is the type of competitor that will never quit. The big question is how long will he be able to take this punishment. He plays against players who are four or five inches taller and who outweigh him by 50 pounds.

The Lakers got off to a fast start last year as they won 20 of their first 21 games. But the injury bug hit Jerry again, as he tore a hamstring muscle in his left leg and spent the final 25 games



Going in for a lay-up shot, Jerry West displays some of his fast-moving talent.

on the bench. The team won only 10 of those games, an indication of Jerry's value to the Lakers as a team man.

Even then, Jerry had a fine year individually as he finished sixth in league scoring with an average of 26.6 points a game. He had 5.5 assists, for fifth place honors, and had a fine percent shooting average from the floor. He has a good eye at the foul line, sinking 77 percent of his foul shots last year and scoring 42 points in one game twice. Barring the injury, he might have finished third in scoring.

Jerry got off to a good start this season and was ranked fourth in scoring when he broke his hand. But you can bet he will come back strong. He has long been termed the most exciting "little" man to come along since Bob Cousy. Now that Cousy has hung up his sneakers, Jerry should stand out alone. Jerry has been named to the last two All-NBA teams, and the Sporting News Basketball Association has just voted Jerry a spot on their All-Star Team for 1964.

ADVERTISING INDEX

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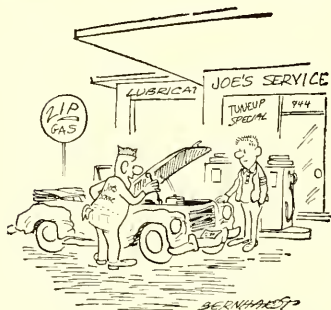
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The First One Doesn't Have A Chance!



"Your oil is sticky, but I wouldn't change it—that's what's holding this motor together."

Tom: "What's worse than a fire in a match factory?"

Bob: "I don't know."

Tom: "A flood in a seltzer factory."

Mark Herbst
Baker, Idaho

He: "Since I met you, I can't eat; I can't sleep; I can't drink."

She (cooly): "Why not?"

He: "I'm broke!"

Dwain Lester
Rockmart, Georgia

An American is a fellow who sips Brazilian coffee from an English cup while sitting on Danish furniture after coming home in a German car from an Italian movie . . . and writes his Congressman with a Japanese ball-point pen demanding that he do something about all the gold that's leaving the country.

Ken Myers
Guthrie Center, Iowa

Visitor: "And I suppose this is one of those hideous caricatures you call modern art."

Museum Guide: "No, madam, this is a mirror."

Frank Govier
Broken Bow, Nebraska

The defendant came forward at his trial to plead guilty. The judge asked, "Why didn't you plead guilty at the very first and save us all a lot of time?"

The crook replied, "I thought I was innocent, but that was before I heard the evidence against me."

Gary A. Lillich
St. Francis, Kansas

The police officer questioned the truck driver who had just run over a small foreign car, "Didn't you look where you were going?"

The truck driver answered, "Yes, sir, I looked upward, frontward, backward, and sideways but never thought of looking down."

Ron Immormina
Fennville, Michigan

Sign in Alaskan restaurant: "Clam chowder 50c, Texas-size 25c."

Danny Martin
Milan, Tennessee

Coroner: "Why do you want to change that death certificate, doctor?"

Doctor: "I signed my name in the space marked 'Cause of Death.'"

Helen McFarland
Scobey, Montana

Two Indian braves named Falling Rocks and Running Bear loved a maiden named White Feather. It was decided that the braves would go hunting and the one who brought back the most food could marry White Feather. Running Bear brought back all kinds of meat, but Falling Rocks never returned. To this day the Indians are still looking for him. They even put up signs along the roads that say, "Watch for Falling Rocks."

Janice Mann
Lindside, West Virginia



"Be careful, Dad, be careful! . . . Don't break my string!"

Ken: "What is television, Doug?"

Doug: "A series of commercials interrupted by a program."

Roy Thompson
Ruleville, Mississippi

On a sign advertising dachshunds: "Get a long little doggie."

Larry Hinson
Nakina, North Carolina

Pete: "What are you doing?"

Joe: "Making an invention."

Pete: "Ha! Ha!"

Joe: "Just remember—they laughed at Edison; they laughed at Bell; they laughed at Morey Gooberpinkle."

Pete: "Morey Gooberpinkle. What did he invent?"

Joe: "Nothing, but they certainly did laugh at him!"

Linda Felber
Waseca, Minnesota

Never criticize your wife's judgment. After all, look whom she married.

James Jackson
Nacogdoches, Texas

Teacher: "Bill, if you could invent anything you wanted, what would it be?"

Bill: "Something to do my homework."

Teacher: "You lazy boy. Ned, what would you invent?"

Ned: "Something that when I pushed a button, my homework would be done."

Teacher: "You two selfish boys. Bob, what would you invent?"

Bob: "Something to push the button."

Karl Arnett
Jackson Center, Ohio



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an order of ham and eggs. When Susan trusted Christ later that summer, it was natural that she should want to attend Bob Jones University. After all, hadn't she seen in the lives of its students that the Christian philosophy of Bob Jones University was practical and workable?

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